

City of Rolling Hills General Plan

Introduction

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June 25, 1990

INTRODUCTION TO THE GENERAL PLAN

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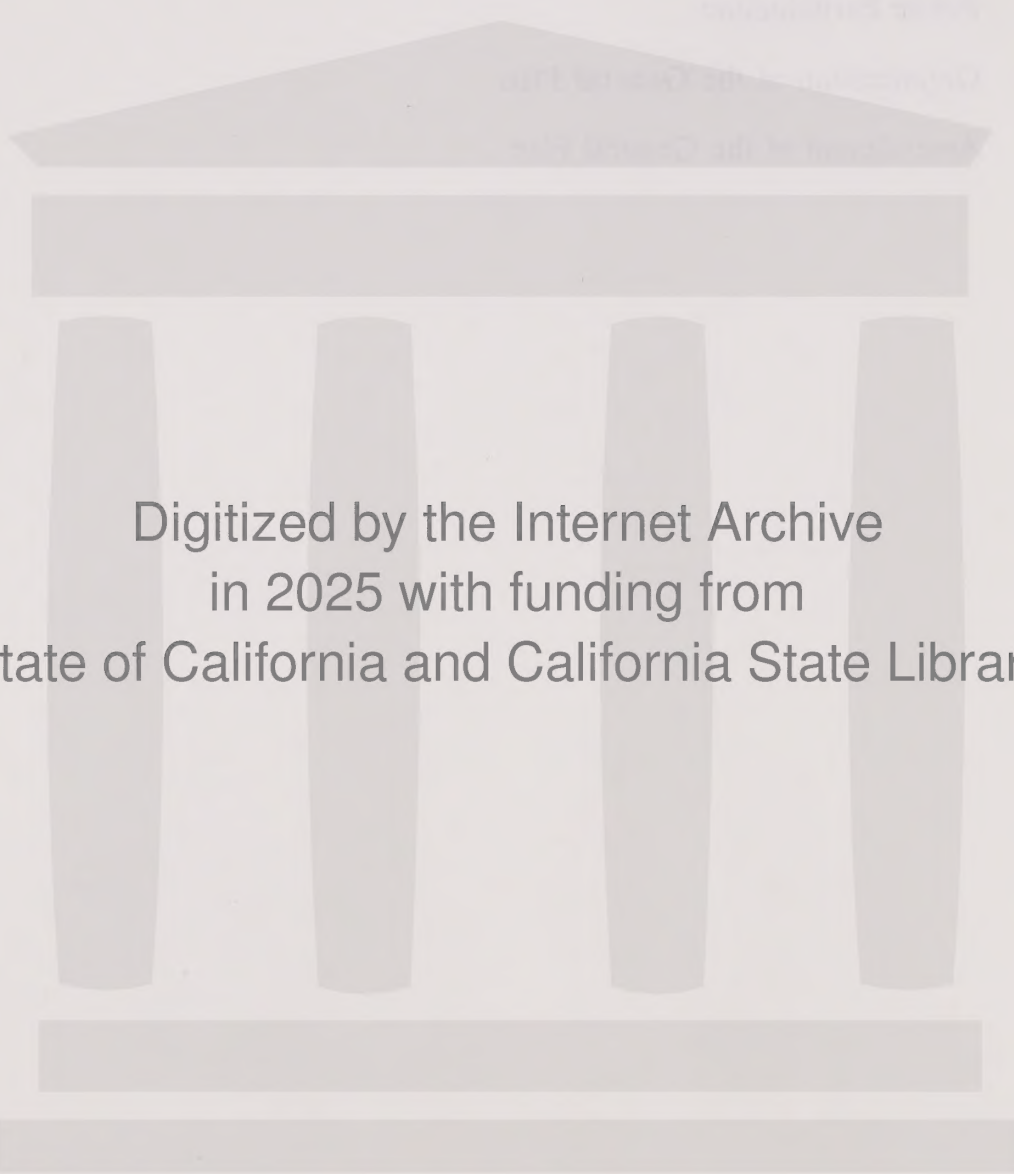


June 25, 1990

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INTRODUCTION TO THE GENERAL PLAN

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HOW TO USE THE GENERAL PLAN

The City of Berkeley has General Plan No. 1 adopted in 1973, and revised prepared in the Planning Element in 1981 and 1984. Changes in the community character of the community, along with changes in the Planning Law, has resulted the need to update the comprehensive update to the City's General Plan.

The Berkeley Hills Planning Element is, in effect, the continuation of the City and its town and the plan for the long range regional planning of the City. The Plan contains information about the future designed to shape the long range development of the City, as well as policies for environmental, social, cultural and economic resources.

California Government Code Section 5500 requires that a general plan contain, among other things: 1) Land Use, 2) Housing, 3) Circulation, 4) Open Space, 5) Conservation, 6) Safety, and 7) Public Works. The Berkeley Hills General Plan I consists of an integrated and internally consistent set of goals and policies that address a number of different social goals related to the future development of the community. These goals developed in the

INTRODUCTION TO THE GENERAL PLAN

The City of Rolling Hills is a beautiful wooded area with deep canyons and hilly terrain located on the Palos Verdes Peninsula (refer to Figure I-1). The community is characterized by one-story rambling ranch style homes, and functions in a regional context where commercial uses and services are provided by adjoining cities.

From its inception in 1936, Rolling Hills has been guided by deed restrictions established by the original developer. With the incorporation of the area in January 1957 as a general law City, the responsibility of governmental activity has been assumed by a city council-city manager system of local government. Through the Rolling Hills Community Association's Board of Directors and Architectural Committee, adherence to the community's original concept as a rural residential community has been maintained.

ROLE AND PURPOSE OF THE GENERAL PLAN

The City of Rolling Hills first General Plan was adopted in 1973, with updates prepared to the Housing Element in 1981 and 1984. Changes in the residential character of the community, along with changes in State Planning Law, has rendered the need to undertake a comprehensive update to the City's General Plan.

The Rolling Hills General Plan is, in effect, the constitution of the City and will serve as a blueprint for the long-range physical planning of the City. The Plan contains community goals and policies designed to shape the long-term development of the city, as well as protect its environmental, social, cultural and economic resources.

California Government Code Section 65302 requires that a general plan contain seven elements: 1) Land Use, 2) Housing, 3) Circulation, 4) Open Space, 5) Conservation, 6) Safety, and 7) Noise. The Rolling Hills General Plan Update consists of an integrated and internally consistent set of goals and policies that address a number of different topic areas related to the future development of the community. These topics correspond to the

INTRODUCTION TO THE TERNAL PLAN

The Ternal Plan is a beautiful and powerful tool for personal growth and transformation. It is a plan that is designed to help you to achieve your goals and to live a life of purpose and meaning. The Ternal Plan is a plan that is designed to help you to achieve your goals and to live a life of purpose and meaning. The Ternal Plan is a plan that is designed to help you to achieve your goals and to live a life of purpose and meaning.

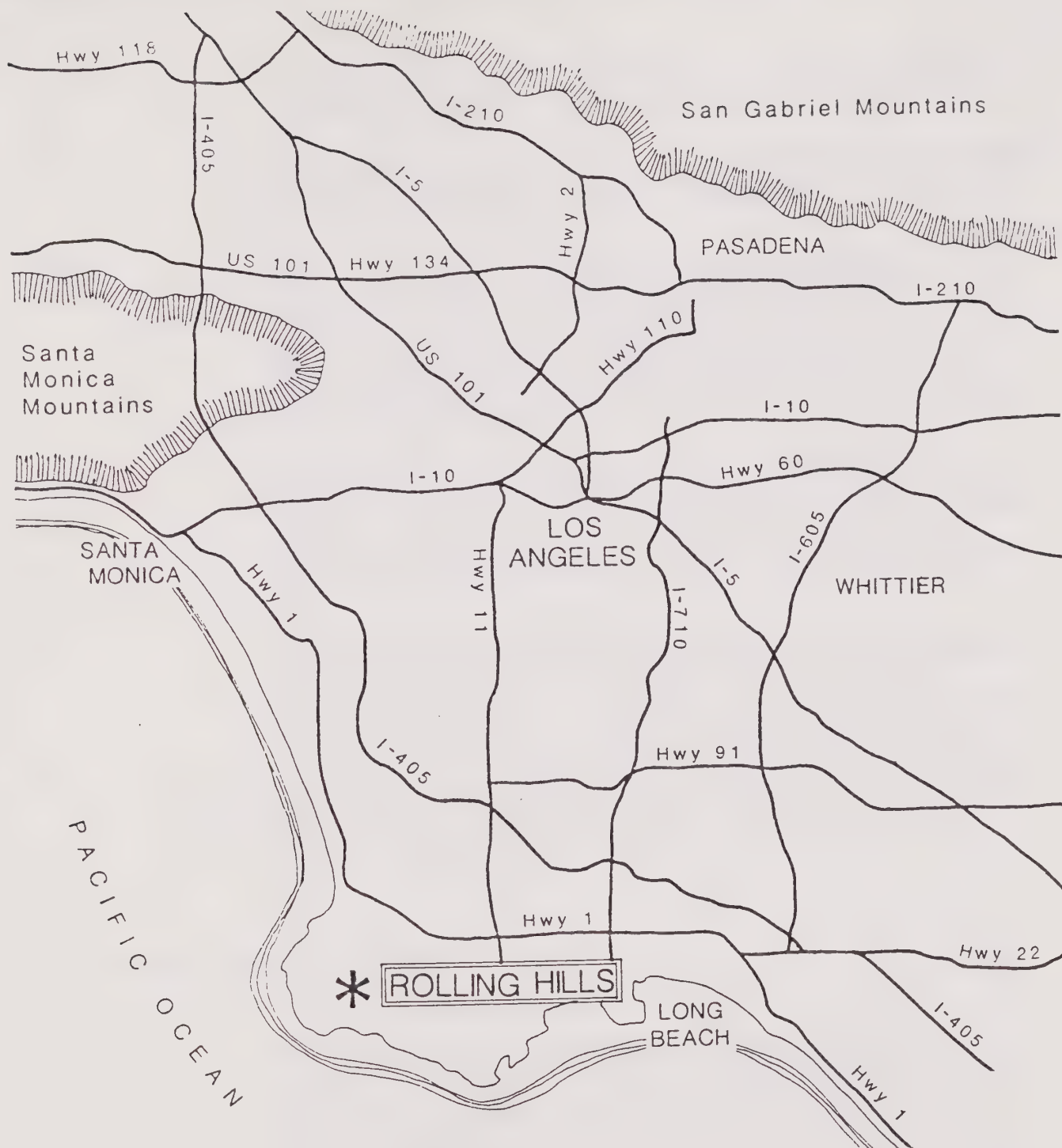
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 North
 
 scale in miles

SOURCE: CBA



Figure I-1
Vicinity Map

JUNE 25, 1990

seven mandated General Plan elements - Land Use, Housing, Circulation, Open Space, Conservation, Safety and Noise.

Although the focus of this Plan is on land use and the need to plan for future development, other issues also benefit from long-range planning. In the Rolling

Hills General Plan, the relationship of the other elements to the Land Use Element is constantly examined. This structure ensures compliance with State law regarding General Plan consistency. Moreover, it establishes a comprehensive document which can improve coordination of community development activities among all units of government.

This Plan is an internally consistent document which provides a comprehensive data base and set of projections for all of its parts. Therefore, it is anticipated that the Plan will require periodic review and possible amendment to ensure that its information is timely and relevant.

Planning case law has placed the General Plan atop the hierarchy of local government law regulating land use. Consequently, consistency between the General Plan and all other land use plans, policies and programs is necessary. Zoning ordinances, specific plans and individual project plans must be consistent with the goals, policies and standards contained in the General Plan. In addition, all capital improvements and public works projects must be consistent with the General Plan.

PUBLIC PARTICIPATION

The public plays an important role in both the preparation and implementation phases of the General Plan. Because the General Plan reflects community goals and objectives, citizens must be involved with issues identification and goals formulation. The City made every effort to insure that the public and various civic organizations were consulted during the plan preparation stage. Additional public involvement was also encouraged through the public hearing process.

The General Plan Advisory Committee was instrumental in identifying the issues to be addressed in the Plan, and in drafting the Plan's goals and policies. Members of the fifteen person

committee were chosen from a variety of interest groups within the City, including members of the City Council, Planning Commission, Traffic Commission, Architecture Committee, Landscape Committee, Wastewater Committee, Viewshed Committee, Wildlife Committee, Community Association, Tennis Club, Women's Club, and Caballeros (equestrian) Club, as well as residents selected at large. The diverse make-up of the Committee resulted in a cross section of knowledge and concern which surfaced from meetings with the group.

A City-wide Community Attitude Survey was conducted to solicit resident response to planning issues, constraints and opportunities to be addressed in the General Plan Update. The results of the questionnaire have been incorporated into the General Plan as appropriate, and will also be utilized for future planning purposes in the City.

Finally, the General Plan and its supporting documents underwent review at public hearings held before the City of Rolling Hills Planning Commission and City Council. At that time, the appointed and elected officials heard public testimony concerning the adequacy of the Draft General Plan.

ORGANIZATION OF THE GENERAL PLAN

The Rolling Hills General Plan consists of an introduction and six elements which together satisfy the content requirements of State Planning Law. To eliminate overlap in subject matter and policy, the Open Space and Conservation elements have been combined as permitted by state law (Government Code Section 65301). The General Plan elements and Land Use Policy Map clearly state the community's goals and policies for the long term development of the City.

Each element is comprised of several sections. The first section is an introduction to the purpose of the element, and its relationship to other General Plan elements. The second section provides background information necessary for issues identification and preparation of element policies. The third section presents a summary of element issue areas which will need to be addressed by policy. The fourth and final section contains the goals and policies designed to guide development decisions relative to the element topic. In addition, the Land Use Element contains a section which

describes the Land Use Policy Map, and the Circulation Element contains a section describing the Circulation Plan.

As required by the California Environmental Quality Act (CEQA), an Environmental Impact Report (EIR) was prepared coincident with the preparation of the Rolling Hills General Plan. This document discusses the change in the City's physical and environmental character which could occur under implementation of the Plan. More specifically, the EIR analyzes the impact of land use buildout under the Plan for each of the Plan's elements, and identifies mitigation measures to minimize these impacts. In accordance with CEQA, the environmental impacts of several land use alternatives to the Plan are evaluated. The General Plan EIR provides a mechanism by which development proposals in conformance with the Plan, and other specified criteria, may forego the preparation of an project specific EIR.

AMENDMENT OF THE GENERAL PLAN

The State recognizes the dynamic nature of the General Plan and provides for periodic review of the document to insure that it is consistent with the conditions, values, expectations, and needs of the community. The State General Plan Guidelines state:

"The General Plan is a dynamic document because it is based on community values and an understanding of existing and projected conditions and needs, all of which continually change. Local governments should plan for change by establishing formal procedures for regularly monitoring, reviewing, and amending the General Plan."

The State (Government Code Section 65588) requires a Housing Element update to be conducted every five years and revisions to be made as necessary to reflect "new conditions, local attitudes, and political realities." It may also be appropriate for a comprehensive review of the entire General Plan to be made along with any subsequent revisions at a time which is concurrent with the Housing Element update. The format of the Rolling Hills General Plan is designed to facilitate the updating and amending of the General Plan by the City.

Land Use Element



June 25, 1990

LAND USE ELEMENT

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LAND USE ELEMENT

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LAND USE ELEMENT

INTRODUCTION

The City of Rolling Hills enjoys the advantages of being located on the San Pedro Hills of the Palos Verdes Peninsula, including cool sea breezes and low concentrations of smog in the summer months, more sunshine due to its elevation above much of the coastal fog, and commanding views of the Pacific Ocean and Los Angeles Basin. Due to its coastal location, Rolling Hills has been able to avoid many of the air quality and traffic problems associated with growth in the Los Angeles area. However, geologic hazards have greatly affected properties within Rolling Hills and have forced the City to examine development policies within certain areas of the community.

This Land Use Element describes official City policy for the location of land uses and their orderly growth and development. It serves as a guide for public officials and citizens to determine the best uses of lands within the City. To the private citizen, the Land Use Element will set forth the type of neighborhood he or she can expect to live in, the location and type of public facilities available, and the time and distance required for travel to necessary activities. Public officials will use the Land Use Element as a guide for placement of public facilities and services, and for directing new development. The Element also serves as a basis for definition of short-range and long-range capital improvement programs.

Purpose of the Element

The intent of the Land Use Element is to describe present and projected land use activity within Rolling Hills. The Element also addresses crucial issues concerning the relationship between land uses and environmental quality, potential hazards, and social and economic objectives.

In accordance with the State of California General Plan Guidelines, the Land Use Element serves the following purposes:

- Identifies land use issues;

- Provides a statement of land use policies and proposals, distinguishing, when appropriate, between short, middle and long-term periods of fulfillment;
- Describes land use density and land use intensities provided for under the Plan, including the relationships of such uses to social, environmental and economic goals and objectives;
- Provides for standards and criteria for physical development within each use area with consideration for land capacity; and
- Describes and depicts land use patterns provided for under the Plan.

Relationship to Other Elements

A major goal in this General Plan Update is to achieve internal consistency throughout the various General Plan elements. Since the Land Use Element regulates how land is utilized, it integrates and synthesizes most of the issues and policies contained in the other Plan elements.

Specifically, the Land Use Element relates to the Housing Element by defining the extent and density of future residential development in the City. The Land Use Element is also coordinated with the Open Space/ Conservation Element in that open space resources are designated on the Land Use Policy Map, and environmental factors are considered in the location of land use types. The Land Use Element also relates to the Safety and Noise Elements by integrating their broad land use recommendations into detailed policies which apply to specific geographic locations. Finally, the Circulation and Land Use Elements are interrelated in that specific land use decisions depend upon traffic routes and circulation patterns.

EXISTING LAND USE

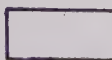








The City of Rolling Hills is an entirely residential community of large one+ acre parcels on 2.98 square miles of land. The land use pattern was established with the original subdivision and sale of parcels which began in 1936. Situated astride the San Pedro Hills of the Palos Verdes Peninsula, Rolling Hills is characterized by white, single-story California ranch style homes with three-rail fences and an abundance of equestrian facilities. Landscaping which was located as parcels developed has matured, rendering the Rolling Hills area a heavily wooded setting. Lot sizes range from a minimum of one acre to several acres in size. Many lots contain a buildable ridge and steep arroyos. The City's zoning allows for one and two acre lots with most lots exceeding these minimum requirements.


Rolling Hills was created by A.E. Hanson and the Palos Verdes Corporation in 1936 following a generally unsuccessful attempt to sell 10 to 50 acre parcels as "dude ranches" to residents of Los Angeles and Beverly Hills. The concept was modified to offer one to five acre parcels to residents of closer-by communities attracted to the cleaner, cooler air, sunshine and absence of congestion. One of Rolling Hills' unique features is the set of Covenants, Conditions and Restrictions which have assured the maintenance and uniformity of properties throughout the years. Buildings are limited to one story in height with three-rail fences surrounding the properties. Residences are strongly encouraged to be of a ranch style, and are required to be painted white. All properties provide easements which are primarily utilized for equestrian trails. The CC&Rs are enforced through the Rolling Hills Community Association. Through the association, fees are levied which are used for maintenance of the roads and recreational facilities.

Beginning in 1938, the 150-acre area known as the Flying Triangle was added to the development's original 600 acres. The Flying Triangle area has, in recent years, been subject to major landslides resulting in building moratoriums for parts of the area that are known to be at risk.

A comprehensive land use survey was undertaken by City staff and the consultant in September 1989 to identify the extent of existing land uses in the community. Figure LU-1 illustrates existing land uses in Rolling Hills; a 1:800 scale colored existing land use map is



- | | |
|--|---|
|  Residential Estate
5 Gross Acres |  Public Facility
(Includes Civic Center, Guard Gates, Public Utilities, and Fire Station) |
|  Residential Estate
3-5 Gross Acres |  Recreation
(Includes Riding Rings, Equestrian Areas, and Tennis Courts) |
|  Residential Estate
3-4 Gross Acres |  Educational |
|  Residential Estate
1-2 Gross Acres |  Vacant Land |
|  Residential Estate
0-1 Gross Acres | |

  North  scale in feet

SOURCE: City of Rolling Hills, October 1989.



Figure LU-1
Existing Land Use

also on file at City Hall. Table LU-1, Existing Land Use Inventory, quantifies the acreage dedicated to the various land uses present in Rolling Hills. The table is divided into five residential density categories and categories for Public Facility, Education, Recreation and Vacant Land. The following sections describe the nature of each of these land uses in Rolling Hills.

Residential

Rolling Hills is comprised almost exclusively of ranch style residential homes. The City's zoning ordinance provides two residential districts. The first requires single-family homes on one acre minimum lots and the second allows single-family homes on two acre minimum lots. Large setback requirements and lot sizes, as well as topographic constraints on many lots provide significant amounts of open space on developed parcels that give the overall community a sense of openness. Many of the lots are large enough to support horses, and many have stables as accessory structures.

In recent years, the character of residential development in Rolling Hills has changed substantially. Many homes are now being constructed to maximize the building area on the lot. The increasing building size has also fostered a tendency for more grading to prepare many of the steeper properties for a structure. Increases in grading practices have had a significant effect on the natural environment and viewsapes. These combined trends have significantly altered the community's character and affect surrounding properties. The results of the Community Attitude Survey indicate a high level of concern among residents related to residential development and design compatibility issues. The City has recently adopted a site plan review ordinance. This type of legislation is new to the City and the General Plan encourages such legislation to preserve and enhance the community's character.

In addition to the changes in community character, increased building size and related grading may have contributed to the instability of soil in the area of the City known as the Flying Triangle. Combined with several winters of heavy rainfall, increases in water discharged from septic systems and increased grading are believed to have contributed to soil destabilization. Except for repairs to existing structures, the City has not permitted any development in this area since 1980 pursuant to provisions of the Building Code which do not permit construction in geologically unstable areas. In order to define the range of existing residential

**TABLE LU-1
CITY OF ROLLING HILLS
EXISTING LAND USE INVENTORY
January 1989**

Land Use	Acreage	DUs
SINGLE-FAMILY RESIDENTIAL		
0-1 acre	49.6	
1-2 acres	436.4	
2-3 acres	430.5	
3-5 acres	317.3	
5+ acres	403.0	
Total Residential	1,636.8	683
PUBLIC/ASSOCIATION-OWNED FACILITIES	5.5	
EDUCATION	30.3	
RECREATION	33.3	
VACANT LAND	203.1	
Total Non-Residential	272.2	
TOTAL ACREAGE	1,908.9 (2.98 sq.miles)	

Source: City of Rolling Hills
compiled by Cotton/Beland/Associates, Inc.

land use, five density ranges were arrived upon. The five categories include parcels of 0-1 acres, 1-2 acres, 2-3 acres, 3-5 acres and 5+ acres. As illustrated in Table LU-1, approximately three percent of the City's developed residential acreage consists of parcels less than one acre in size, 20 percent consists of parcels between 3-5 acres, with 1-2 acre parcels, 2-3 acre parcels, and 5+ acre parcels each comprising 25 percent of the City's developed acreage. A total of 683 single-family dwelling units have been developed in Rolling Hills on 1,636.8 acres of land.

Public/Association-Owned Facilities

Public facilities owned by the City of Rolling Hills and private facilities owned by the Rolling Hills Community Association provide for the needs of the community. The City owns the Rolling Hills Administrative Building which houses the offices of the City of Rolling Hills and the Rolling Hills Community Association. The City also owns a maintenance building, three tennis courts and two equestrian riding rings.

The Community Association owns roadway easements and the guard gates. The Palos Verdes Water Company owns two water tanks and several antenna towers adjacent to and accessed through Rolling Hills. A major radar installation site is contiguous to the City's eastern boundary that is operated by the Federal Aeronautic Administration. Finally, the Los Angeles County Fire Protection District owns and operates a Fire Station within the City. Table LU-1 shows facilities owned by the City, other public entities, and the Community Association. These facilities comprise a total of 5.5 acres within the community.

Education

The Palos Verdes Peninsula School District owns a site of 30.3 acres which is located south of Crest Road along the City's western boundary. The site is home to the Rancho Del Mar Continuation High School which serves the Palos Verdes Peninsula Unified School District. The high school serves the communities of Rolling Hills, Rancho Palos Verdes, Palos Verdes Estates and Rolling Hills Estates. The continuation high school program provides students an opportunity to complete required academic courses of instruction and a program which offers an occupational orientation. Enrollment in the Rancho Del Mar Continuation High School has a capacity of 125 students. Due to the unique nature of the school, enrollment

varies substantially and quickly as students can graduate at any time. The site is also used for the storage and maintenance of school district vehicles and equipment. Access to the school district property is via Crest Road outside the City.

Recreation

The City contains 33.3 acres of recreational open space. Opposite the City administration building are three City-owned tennis courts which are operated and maintained by the Rolling Hills Community Association. The courts are open to Association members and their guests and are operated from 7 a.m. to 10 p.m. Also contained within the City are two riding rings and a series of trails. The trails are an extensive network laced throughout the City affording hikers and equestrians alike varied opportunities within the community's boundaries. Also available for recreational use within Rolling Hills is an 8.01 acre parcel on the north end of Storm Hill which was dedicated through provisions of the Quimby Act. The property is open to City residents for use as an open equestrian area.

Vacant Land

Of the numerous vacant properties in Rolling Hills, many are constrained from future developments. The area within the Flying Triangle which is subject to landslides is under a moratorium and will not likely be buildable into the foreseeable future due to building code requirements which do not permit construction in geologically unstable areas. Other properties exist which are constrained due to excessive slopes on the property. It is estimated that there are 203.1 acres of vacant, residentially zoned land within the City. Of that total, 172.75 acres are unconstrained (either located outside the Flying Triangle and/or not constrained by slope) and, subject to site plan review requirements, may accommodate a maximum of 59 additional residential units.

SIGNIFICANT LAND USE ISSUES

The following list is a summary of issues and opportunities relating to land use that have been identified in Rolling Hills from the Community Attitude Survey and through discussions with the General Plan Advisory Committee. These issues are addressed in the Goals and Policies of this Land Use Element.

- The landslide area within the Flying Triangle has rendered a large amount of land within the City's southwest area unsuitable for residential development, and is subject to ongoing changes in topography.
- Due to the constraints of the landslide area within the Flying Triangle, a large amount of open space remains open to alternative uses such as recreation or study of such geologic hazards.
- The City's topography renders large parts of many parcels constrained, thus leaving smaller areas available for development. Recent residential construction has maximized lot coverage through extensive grading.
- Grading of individual lots have significantly altered the topography and drainage patterns on many lots thus eliminating certain viewsapes and diminishing of the natural character of the City.
- New residential development within the community has changed significantly in character from the original residential developments, thus generating an increasing degree of incompatibility between adjacent uses.
- The increasing size and bulk of recent residential developments within Rolling Hills and the surrounding area have substantially reduced the natural, rural environment which has characterized Rolling Hills in the past.
- The use of private septic systems within the City may have contributed to soil instability. While lot size does not mandate a conversion to a common sewage system, the City may facilitate such a conversion.

OVERVIEW OF LAND USE PLAN

The Rolling Hills Land Use Policy Map is presented in Figure LU-2. The Map provides a graphic representation of the General Plan's development policies and indicates land uses as they are designated and for which policies and standards have been formulated. The major goal of Rolling Hills' General Plan Update is to maintain and foster the community's rural and residential environment while ensuring that new development is in conformance with established community standards.

The land use classifications designated by the General Plan provide for the development of the community's limited vacant properties in a manner that is consistent with established and approved development patterns. The land use classifications established by this General Plan Update reflect a system that is different but generally consistent with the previous land use classifications. The dominance of a low density single family land use pattern clearly continues to be the policy of the City of Rolling Hills. Table LU-2 presents the list of updated General Plan land use categories, their general development standards and characteristics. The following discussion will elaborate on the location and intent of the General Plan land uses.

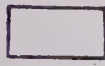



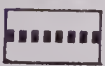
Residential Land Uses

The Plan continues the City's two existing single-family residential land use categories - Low Density and Very Low Density. The former mandates one net acre minimum lot sizes per dwelling unit and the latter mandates two net acre minimum lot sizes per dwelling unit. Through these two classifications, the City will be able to ensure that the remaining undeveloped properties throughout Rolling Hills will be developed at densities that are compatible with existing residential development.

Civic Center

The Civic Center designation has been added to the Land Use Policy Map to specify the 1.3 acre area that is currently used by the City for its administrative offices. The Civic Center land use category has been created to accurately reflect uses that exist within the City, and to provide consistency between the General Plan Land Use Policy Map and the Zoning Map.



-  Very Low Density Residential 2
Net Acres/Dwelling Unit
-  Low Density Residential 1
Net Acres/Dwelling Unit
-  Civic Center
-  Publicly Owned Open Space
-  Landslide Hazard Overlay




  North  scale in feet



Figure LU-2
Land Use Policy Map

**TABLE LU-2
CITY OF ROLLING HILLS
GENERAL PLAN LAND USE CATEGORIES**

Designation	Development Standards	Development Characteristics
Residential		
Very Low Density	2+ net acres/dwelling unit, single story	Single-family homes on large lots, usually custom designed. Parcels often contain varied topography and canyon areas.
Low Density	1-2 net acres/dwelling unit, single story	Single-family homes on large lots, often custom designed.
Public		
Civic Center	Single story	City Hall and associated facilities.
Publicly-Owned Open Space	Development prohibited	Equestrian riding rings and undeveloped open space areas owned by the City.
Landslide Hazard Overlay	Development prohibited unless landslide hazard is mitigated	Active landslide areas requiring mitigation of geologic hazards prior to development.

Publicly-Owned Open Space

While the majority of recreational open space within the community is maintained by the Rolling Hills Community Association, a limited amount of open space is also owned by the City. Areas of publicly-owned open space lie at the northern end of Storm Hill where a parcel of eight acres was dedicated to the City through the provisions of the Quimby Act. Also included as publicly owned open space are the two equestrian riding rings owned by the City. The purpose of separating out publicly-owned open space is to identify lands that are owned and maintained by the City and will remain as open space. In addition, this land use category could also be utilized in the future for any additional open space land purchased by the City.

Landslide Hazard Overlay

A Landslide Hazard Overlay classification has been created to address the landslide hazards present in Rolling Hills. Landslide hazards have occurred most notably in the Flying Triangle area beginning in 1980. The reasons for the onset of landslide activity are multiple and are addressed in detail in the Safety Element.

The Landslide Hazard Overlay classification has been developed to further establish the City's continuing policy which prohibits development in areas which are known to be subject to active landslides, specifically the Flying Triangle. Establishing this policy in the General Plan provides the framework for the inclusion of specific criteria in the Zoning Ordinance. Residential development will be permitted pursuant to the underlying zoning, only where evidence can be provided that establishes such development as posing no hazard to the property or adjacent properties. This evidence will be formed on a case by case basis upon review of geologic and soils information and hydrologic and topographic analyses. The Rolling Hills Zoning Ordinance, upon revision, will specify development constraints in overlay areas.

Implications of Land Use Policy

The Land Use Element provides for the continued residential emphasis of the Rolling Hills community. The General Plan ensures that this growth will take place in a way that promotes compatibility with adjacent properties, preserves the existing rural residential character, and is environmentally sensitive. The amount

of additional growth that can be accommodated under this General Plan is presented as Table LU-3. As this table illustrates, the Plan only provides for the expansion of residential uses.

**TABLE LU-3
CITY OF ROLLING HILLS
ESTIMATED GENERAL PLAN BUILDOUT
NET INCREASE IN DEVELOPMENT**

Residential	Acres	Dwelling Units	Population
Very Low Density	148.50	49	156.8
Low Density	24.25	10	32.0
Totals	172.75	59	188.8

Based on an average household size of 3.2 persons.

Source: City of Rolling Hills
Cotton/Beland/Associates, Inc.

The Plan accommodates a maximum net increase of 59 single-family dwelling units, representing an approximate nine percent increase over the City's existing (1989) 683 dwelling units. The majority of this growth would occur on the properties under the Very Low Density classification, residential development on 2+ acre parcels accounting for 83 percent of the City's additional growth. Growth in the residential areas will occur under different circumstances. Some property will be subdivided from vacant property. This will account for 28 additional units in the Very Low Density classification. An additional 12 units in the Very Low Density classification will be allowed on subdividable property which already contains at least one dwelling unit. The remaining new development will take place on individual lots which are currently vacant. This will account for 10 additional units in the Low Density classification and nine units in the Very Low Density classification.

The population of Rolling Hills as of January 1, 1989 was 2,092. Over the City's 2.98 square miles the population density is 702 persons per square mile. Based on Department of Finance estimates of an average 3.2 persons per household in Rolling Hills, an additional 189 persons could reside in the City under General Plan buildout. This would result in an ultimate population density of 765 persons per square mile.

GOALS AND POLICIES

The goals and policies contained in the 1973 General Plan were reviewed with the General Plan Advisory Committee as part of the General Plan update process. The following goals and policies contain revisions and additions to those previous goals and policies. These goals and policies reflect current land use issues affecting the community of Rolling Hills and will serve as a guide to future policy decisions made for the City.

GOAL 1: Maintain Rolling Hills' distinctive rural residential character.

Policy 1.1: Maintain the City's one and two acre minimum lot size requirements.

Policy 1.2: Maintain the City's one story height limitation to preserve scenic viewsheds.

Policy 1.3: Require the use of landscaping which is compatible with the City's rural character.

Policy 1.4: Require that development conform with the City's existing low-profile, ranch style architecture.

Policy 1.5: Preserve a natural twilight environment at night by prohibiting street lighting and uplighting of landscaping and minimizing driveway lighting.

Policy 1.6: Evaluate the City's existing requirement for minimum stable size to assess its appropriateness and effectiveness.

GOAL 2: Accommodate development which is compatible with and complements existing land uses.

Policy 2.1: Evaluate the City's lot coverage standards to assess their effectiveness in providing for development which is compatible with adjacent uses.

Policy 2.2: Require that lighting of residential properties not adversely affect adjacent residences.

Policy 2.3: Maintain and provide regulations for sufficient setbacks and easements to provide buffers between residential uses.

Policy 2.4: Ensure the siting of buildings maintain and preserve viewscales from adjacent structures through the site review process.

GOAL 3: Accommodate development that is sensitive to the natural environment and accounts for environmental hazards.

Policy 3.1: Establish a Landslide Overlay classification to reflect the more stringent development standards the City has applied to development in active landslide areas.

Policy 3.2: Maintain strict grading practices to preserve the community's natural terrain.

Policy 3.3: Require the use of native, naturally fire resistant landscape materials in development.

Policy 3.4: Maintain the City's open space requirement to preserve natural vegetation and wildlife habitat.

Policy 3.5: Facilitate the preservation and restoration of viewscales through the removal of obstructions.

Housing Element



December 23, 1991

CITY OF ROLLING HILLS
HOUSING ELEMENT

December 23, 1991

Cotton/Beland/Associates, Inc.
747 East Green Street, Suite 400
Pasadena, California 91101

HOUSING ELEMENT
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HOUSING ELEMENT

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HOUSING ELEMENT

INTRODUCTION

The City of Rolling Hills is an entirely residential community of rural character with large lot parcels of one acre or more. The City encompasses 2.98 square miles of land on the Palos Verdes Peninsula. The land use pattern was established with the original subdivision and sale of parcels, which began in 1936. From its inception, the emphasis in Rolling Hills has been to create and maintain a distinctive rural residential character which preserves the sense of openness created by the area's hilly topography. The City's minimum lot size requirements are reflective of the community's desire to maintain its rural setting, recognition of the limitations presented by the varied topography and the lack of urban infrastructure.

The City was established as a community of single-family homes on large parcels and has continued as such for more than 50 years. Today it is essentially a built-out community. All of the developable property in the City is subject to enforceable covenants, conditions, and restrictions (CC&Rs) which run with the property in perpetuity and greatly restrict development within the City. These restrictions have been in existence since 1936.

A large, geologically unstable open area exists in the City. It once contained numerous homes, but many of these suffered irreparable damage in a major slippage in the 1980s. Soils and geologic conditions place great constraints on development within the City. The City has experienced major landslides due to soil saturation and instability. Since only a few homes on the periphery of the City are served by a sewer system, most new homes must also utilize septic tanks and leach fields for disposal of sanitary waste. Past experience suggests substantial care and restraint must be exercised in the expansion of any existing systems or the addition of new systems to avoid possible ground instability due to saturation of the upper soil layers. This situation and existing infrastructure constraints act to limit densities in the City. The City has acted to restrict development in areas of past landslides and other areas which studies indicate to be potentially unsafe.

While the Land Use Element is concerned with housing in a spatial and density context, the Housing Element identifies housing programs aimed at housing conservation, new construction, and programs to address housing issues for special needs groups. This Housing Element builds upon land use goals and policies which are concerned with where new housing will be located and at what density it will be constructed. The Element establishes policies that will guide City officials in daily decision making and sets forth an action program designed to enable the City to realize its housing goals. The Rolling Hills Housing Element is an official municipal response to legal requirements that housing policy be made part of the planning process and has been prepared in accord with State laws which govern the preparation of housing elements.

The Regional Housing Needs Assessment (RHNA) prepared by SCAG documents Rolling Hills as having an existing affordable housing need for lower income households of zero. Rolling Hills' future new construction need is for 40 dwelling units over the 1989-1994 time period, specified by the RHNA. The City's Land Use Plan provides for the development of 59 additional dwelling units, thereby providing a development capacity which is more than adequate to accommodate the City's share of regional housing needs.

State Policy, Authorization and Mandate

The California State Legislature has identified the attainment of a decent home and a suitable living environment for every Californian as the State's major housing goal. Recognizing that local planning programs play a significant role in the pursuit of this goal, and to assure that local planning effectively implements statewide housing policy, the Legislature added Article 10.6 to the Government Code in 1980 and incorporated into law the Housing Element Guidelines promulgated by the California Department of Housing and Community Development (HCD). The original Housing Element Guidelines were adopted on June 17, 1971, and revised guidelines were adopted on November 17, 1977.

The Government Code specifies the intent of the Legislature to insure that counties and cities actively participate in attaining the state housing goal, and sets forth specific components to be contained in a housing element. These include the identification and analysis of existing and projected housing needs, resources and constraints; a statement of goals, policies, quantified objectives, and scheduled programs for the preservation, improvement and development of housing; identification of adequate sites for

housing; and adequate provision for the existing and projected needs of all economic segments of the community.

State law requires Housing Elements to be updated at least every five years. The City has prepared the following updated Housing Element in compliance with the July 1, 1989 deadline for jurisdictions within the SCAG region.

Purpose of Element

The purpose of the Housing Element is to identify the City's existing and projected housing needs, and to establish policies which City officials will use in daily decision making in addressing these needs. The goals of providing decent, safe, sanitary and affordable housing to present and future residents of the City is a primary focus of the Element. The Element also directs emphasis at specific target groups requiring attention in the City, specifically the elderly. The Housing Element serves as a flexible policy guideline to defined problems which may arise in meeting housing needs.

Relationship to Other Elements

As stated in the Land Use Element, a major purpose of the updated General Plan is to achieve internal consistency among all elements. Together these elements will provide the framework for development of those facilities, services, and land uses necessary to address the needs and desires of City residents.

By undertaking a comprehensive update to the City's General Plan, background information and policy direction presented in one element is also reflected within other Plan elements. For example, residential development capacities established in the Land Use Element and constraints to housing development identified in the Safety Element are incorporated within the Housing Element. The Housing Element is thus inter-related with the other General Plan elements, and is entirely consistent with the policies and proposals set forth by the Plan.

**TABLE H-1
STATE HOUSING ELEMENT REQUIREMENTS**

REQUIRED HOUSING ELEMENT COMPONENT		REFERENCE
A.	<u>Housing Needs Assessment</u>	
1.	Analysis of population trends in Rolling Hills in relation to regional trends	Household Needs Assessment-Demographic Trends
2.	Projection and quantification of Rolling Hills' existing and projected housing needs for all income groups	Housing Needs Assessment-Household Characteristics
3.	Analysis and documentation of Rolling Hills' housing characteristics including the following:	
	a. level of housing cost compared to ability to pay;	Housing Needs Assessment-Household Characteristics
	b. overcrowding;	Housing Needs Assessment-Household Characteristics
	c. housing stock condition.	Housing Needs Assessment-Housing Unit Characteristics
4.	An inventory of land suitable for residential development including vacant sites and sites having redevelopment potential and an analysis of the relationship of zoning, public facilities and services to these sites	Housing Opportunities-Residential Land Inventory
5.	Analysis of existing and potential government constraints upon the maintenance, improvement, or development of housing for all income levels	Housing Constraints-Governmental Constraints
6.	Analysis of existing and potential nongovernmental and market constraints upon maintenance, improvement, or development of housing for all income levels	Housing Constraints- Market Constraints, Environmental and Infrastructure Constraints
7.	Analysis of special housing needs: handicapped, elderly, large families, female-headed households, and homeless	Housing Needs Assessment-Household Characteristics
8.	Analysis of opportunities for energy conservation with respect to residential development	Housing Needs Assessment-Housing Unit Characteristics

TABLE H-1
STATE HOUSING ELEMENT REQUIREMENTS

REQUIRED HOUSING ELEMENT COMPONENT		REFERENCE
B.	<u>Goals and Policies</u>	
1.	Identification of Rolling Hills' community goals relative to maintenance, improvement and development of housing	Housing Plan- Goals and Policies
2.	Quantified objectives and policies relative to the maintenance, improvement, and development of housing in Rolling Hills	Housing Plan- Goals and Policies
C.	<u>Implementation Program</u>	
	An implementation program should do the following:	
1.	Identify adequate sites which will be made available through appropriate action with required public services and facilities for a variety of housing types for all income levels	Housing Plan- Implementing Programs
2.	Program to assist in the development of adequate housing to meet the needs of low- and moderate-income households	Housing Plan- Implementing Programs
3.	Identify and, when appropriate and possible, remove governmental constraints to the maintenance, improvement, and development of housing in Rolling Hills	Housing Plan- Implementing Programs
4.	Conserve and improve the condition of the existing affordable housing stock in Rolling Hills	Housing Plan- Implementing Programs
5.	Promote housing opportunities for all persons regardless of race, religion, sex, marital status, ancestry, national origin or color	Housing Plan- Implementing Programs

Relationship to Private Land Use Restrictions

CC&Rs (covenants, conditions and restrictions) represent private contractual obligations between homeowners and are usually established at the time a subdivision or community is built. Development in Rolling Hills is severely limited by CC&Rs that apply to almost all of the property in the City. In some instances the City zoning ordinance is less restrictive than the CC&Rs in Rolling Hills. The City enforces the provisions of the zoning ordinance. However, the provisions of the CC&Rs are rigorously enforced by the Rolling Hills Community Association.

Demographic Trends

Population Growth

As of January 1, 1989, the City of Rolling Hills had a resident population of 2,092 persons, making it the sixth smallest city in Los Angeles County. With a 1970 population of 2,050 and a 1980 population of 2,049, Rolling Hills experienced only a two percent net population increase over the past two decades. Some population loss did, however, occur as a result of the six homes which were severely damaged and four which were destroyed in the Flying Triangle Landslide. Limited growth in the City's population is indicative of the fact that the majority of Rolling Hills' residential lots are built out, with a diminishing supply of parcels available for development. Opportunities for new residents to move into Rolling Hills have occurred through new housing construction, redevelopment of the City's original housing stock, and changes in ownership. This residential turnover can be evidenced in the changing demographics and household characteristics of the City's population.

Age Composition

The age distribution of Rolling Hills residents in 1980 as reported in the Census and in 1989 as estimated by Urban Decision Systems is illustrated in Table H-2. The median age in Rolling Hills was 38.2 in 1980, as compared to 30.9 in the County, 29.9 in California, and 30.0 in the United States. This higher median age in Rolling Hills is reflective of the City's large middle-age and elderly population, and potentially its higher priced housing stock deterring first time homebuyers and young families with children. Estimates of the City's age distribution for 1989 depict a continued trend toward an aging population, with the median age increasing to 39.7 years, and nearly 40 percent of the population over 45 years of age.

Employment

The 1984 Industrial-Commercial Employment project reported a total of 230 jobs in the City. Most of the employees in the City were reported to be in the services industry, jobs primarily related to domestic and landscape services. The jobs/housing relationship in the City is obviously tilted towards housing, since most residents

work in professional and business related activities located outside the City. No significant change in the number of jobs in Rolling Hills is expected since no new source of employment is expected in the future.

Ethnicity

The ethnic make-up of Rolling Hills residents is presented in Table H-3. As this table reveals, the majority of the City's residents in 1980 were White (93%). The proportion of Whites had decreased to an estimated 87.9 percent in 1989, reflecting the influx of other ethnic groups. The second largest ethnic group in the City is persons of Spanish/Hispanic origin, representing an estimated 12 percent of the City's 1989 population; this reflects a significant increase from 1980 when Spanish/Hispanics represented 4.5 percent of the population. It should be mentioned, however, that persons of Spanish/Hispanic origin are now a self-designated category separate from race (see note in Table H-3). Rolling Hills has also experienced an influx of residents of the Asian/Pacific Islander race. This group constitutes an estimated 8.6 percent of the City's 1989 population, as compared with 5 percent in 1980. Blacks, American Indians, and "Other" ethnic groups are the least represented, in total comprising an estimated 3.5 percent of the population.

Household Characteristics

The characteristics of the population provide an essential component toward the understanding of growth and change in a community. In addition, information collected on the household level provides a good base for the analysis of a community's housing needs. The Census defines a household as all persons who occupy a housing unit, which may include single persons living alone, families related through marriage or blood, and unrelated individuals living together. Persons living in retirement or convalescent homes, dormitories, or other group living situations are not considered households.

Household Composition and Size

In 1980, there were 629 households in Rolling Hills. According to the Department of Finance, the City had grown to 647 households in 1989, representing a 2.7 percent increase during the nine year period. While the net increase in households has been nominal, actual residential turnover has been more substantial based on recent trends in residential recycling. An August 1988 report

TABLE H-2
CITY OF ROLLING HILLS
AGE CHARACTERISTICS OF POPULATION: 1980, 1989

Age Range	1980 (a)		1989 (b)	
	# of Persons	% of Population	# of Persons	% of Population
0-5	100	4.9	117	5.6
6-13	293	14.3	247	11.8
14-17	221	10.8	163	7.8
18-20	95	4.6	69	3.3
21-24	85	4.1	107	5.1
25-34	122	6.0	144	6.9
35-44	335	16.3	424	20.3
45-54	383	18.7	398	19.0
55-64	268	13.1	249	11.9
65+	147	7.2	174	8.3
TOTAL	2,049	100.0	2,092	100.0
FEMALE	1,044	50.9	1,060	50.7
MALE	1,005	49.1	1,032	49.3
Median Age	38.2		39.7	

Source: (a) U.S. Dept. of Commerce, Bureau of the Census,
1980 Census Report.

(b) Urban Decision Systems, Demographic Trends:
1980-89-94.

TABLE H-3
CITY OF ROLLING HILLS
RACE AND ETHNICITY; 1980, 1989

Race and Ethnicity	1980 (a)		1989 (b)	
	# of Persons	% of Population	# of Persons	% of Population
White	1,906	93.0	1,838	87.9
Black	27	1.3	46	2.2
American Indian	6	.3	11	.5
Asian/Pacific Islander	102	5.0	180	8.6
Other	8	.4	17	.8
TOTAL	2,049	100.0	2,092	100.0
Spanish/Hispanic	92	4.5	251	12.0

Source: (a) State of California, Dept. of Finance, Controlled Population Estimates for 1-1-89.
(b) Urban Decision Systems, Demographic Trends: 1980-89-94.

Note: In the 1980 Census, a large percentage of Spanish origin persons classified themselves as Other rather than White, Black, Asian, or American Indian. To bring this data in line with current Bureau of the Census practice, Spanish/Hispanic respondents have been redistributed among the other racial categories based on their overall proportion in the area being analyzed, as well as being separated out as "Spanish/Hispanic." Therefore, the population identified in the Spanish/Hispanic category is not counted in the total.

prepared for the City by The Keith Companies entitled "Residential Trends Analysis" documents 18 residential tear downs/rebuilds and an additional 23 major remodeling projects between 1985 and 1988. The 1989 Community Attitude Survey confirms an extensive level of remodeling activity in Rolling Hills, with approximately 15 percent of households responding indicating their residence had undergone remodeling since 1985.

Families represent the City's predominant household type, comprising approximately 90 percent of all households. In contrast, families represent 72 percent of all households County-wide. This high concentration of family households in Rolling Hills is reflective of the City's land use pattern of large, single-family homes and lack of multi-family rental properties. Correspondingly, average household size is also significantly larger in Rolling Hills (3.2 persons per unit) than that evidenced County-wide (2.8 persons per unit).

Overcrowding

The Census defines overcrowded households as units with greater than 1.01 persons per room, excluding bathrooms, kitchens, hallways and porches. Overcrowding reflects the inability of households to buy or rent housing which provides reasonable privacy for their residents. According to the 1980 Census, the incidence of overcrowding in Rolling Hills was minimal, with less than one percent of all households defined as overcrowded, compared to over 11 percent County-wide.

Income

Rolling Hills is a wealthy community with an estimated average 1989 household income of \$193,438 and an estimated median household income of \$82,400 (Source: Urban Decision Systems). SCAG estimated that in 1988 Rolling Hills had 46 lower income households defined as households which earn less than 80 percent of the County median income. Because no household is reported to pay over 30 percent of its income on housing (see Housing Affordability) and housing costs in the City are relatively very high, this group is probably comprised of persons with high wealth reserves and/or with high home equity reserves. This statistic may also reflect live-in help employed by resident households.

Housing Affordability

State and Federal standards for housing overpayment are based on an income-to-housing cost ratio of 30 percent and above.

Households paying greater than this amount have less income left over for another necessities such as food, clothing, utilities and health care. Upper Income households are generally capable of paying a larger proportion of their income for housing, and therefore estimates of housing overpayment generally focus on lower income groups.

The Regional Housing Needs Assessment (RHNA) prepared by SCAG identifies housing overpayment for the City's lower income households based on data from the 1980 Census. Lower income households are defined as households whose total gross income is less than 80 percent of the County median. According to the RHNA, 46 of Rolling Hills' 646 households in 1988 were classified as lower income. However, none of these lower income households were identified as "overpaying" for housing. This is likely due to the fact that the City's lower income households are predominately retired households on fixed incomes whose homes have already been paid off.

Special Needs Groups

Certain segments of the population may have a more difficult time finding decent, affordable housing due to special circumstances. These "special needs" households include the elderly, handicapped persons, large families, female-headed households, farmworkers, and the homeless.

Elderly: The special needs of many elderly households result from their lower, fixed incomes, physical disabilities, and dependence needs. An estimated 174 elderly persons (65 years and older) resided in Rolling Hills in 1989, representing 8.3 percent of the population. The proportion of elderly can be expected to increase as those persons between the ages of 45 and 64 (31% of Rolling Hills' population) grow older.

The housing needs of the City's elderly can be addressed through shared living arrangements, equity conversion programs and congregate housing.

Elderly persons in Rolling Hills appear not to require financial assistance to obtain adequate housing. Home equity, accumulated wealth, and passive income can be assumed to be available to

elderly persons in the City. The programs discussed in the final section of the Element allow seniors to convert wealth to usable income if required to assure adequate housing and care.

Handicapped: Physical handicaps can hinder access to housing units of traditional design as well as potentially limit the ability to earn adequate income. The 1980 Census contains data on persons who have physical disabilities that are work and/or public transportation related. According to the Census, there were 53 persons in Rolling Hills with a work disability, which was defined as a physical condition that impeded a person's ability to work. Another 18 persons had a public transportation disability, defined as a physical condition that presented difficulty in the use of public transportation. In aggregate, an estimated 3.5 percent of the City's residents were physically handicapped in 1980, translating to an estimated 73 handicapped residents in 1989. Some of these persons, however, may have handicaps which do not entail special housing needs. For example, the Census includes in its definition of "disabled" persons those with emphysema and emotional disorders, although neither of these disabilities affect housing needs. The Community Attitude Survey identified 1.9 percent of the City's households as having one or more members confined to a wheelchair.

Income and wealth characteristics of Rolling Hills residents indicate that handicapped persons in Rolling Hills can afford to modify their housing to accommodate special needs. Handicapped elderly persons can also obtain assistance through senior services programs, including the congregate care, shared housing and equity conversion programs adopted as part of this element.

Large-Families: Large families are identified as a group with special housing needs based on the limited availability of adequately sized, affordable housing units. An estimated 20 percent of the City's households have five or more members, translating to 129 households. This high incidence of large households is reflective of the City's large unit sizes (the median-sized house in 1980 had eight rooms), many of which include separate quarters for domestic help. While the City's large units are by no means affordable to lower income households, it is doubtful that the City has any large households which are lower income.

Female-Headed-Households: Female-headed households are more likely to need housing assistance due to an average pay scale for women substantially below that for men. In 1980, 3.5 percent of

Rolling Hills' households were headed by a woman, translating to an estimated 23 households in 1989. Approximately half of these female households in Rolling Hills have dependent children. Female-headed households in Rolling Hills are likely to be divorced women with children, or widows; Housing Element programs for large families and the elderly will address the needs of these groups. The 1980 Census indicates that only two female-headed households had incomes which fell below the poverty level, although actual household income may be under-reported due to failure to report all childcare and alimony payments. The residents of Rolling Hills are likely to have other resources, such as wealth reserves with which to pay for housing and other necessities.

Farmworkers: The special housing needs of many farmworkers stem from their low wages and the insecure nature of their employment. Only 12 Rolling Hills' residents were employed in the "farming, forestry and fishing" occupations in 1980. The demand for housing generated by farmworkers in the City is thus estimated to be extremely low if not non-existent.

Homeless: Throughout the country, homelessness has become an increasing problem. Factors contributing to the rise in homelessness include the general lack of affordable housing for low and moderate income persons, increases in the number of persons whose incomes fall below the poverty level, reductions in public subsidy to the poor, and the de-institutionalization of the mentally ill.

At present, the County of Los Angeles does not have specific data on the number of homeless people surviving on a daily basis in the metropolitan area. The number is believed to be between 35,000 and 50,000, leaving Los Angeles with the worst homeless problem in the United States. Within the City of Rolling Hills, the homeless problem is non-existent. None of the South Bay area social service agencies or the Lomita Station of the Los Angeles County Sheriff's office have any evidence that homeless persons exist within Rolling Hills. Part of the reason for this is that no commercial or social services exist in the City to attract homeless individuals or families. Additionally, Rolling Hills' gated entries, wildlife and rugged terrain provide an inhospitable environment for homeless. Income and wealth characteristics of Rolling Hills residents indicate that residents have financial and other resources to draw on in the event of emergencies that could otherwise precipitate a housing crisis.

While the City of Rolling Hills currently does not have a homeless population, the City will coordinate with and direct the

homeless to local social service providers if the need arises in the future. As identified in Table H-4, homeless social service providers that exist nearest to Rolling Hills are in Wilmington and San Pedro. The Beacon Light Mission in Wilmington currently has 26 beds and is in the process of expanding to 40. The Mission is open to adults but will also accept families. While no one has been turned away from the dining tables in over a year, the beds are usually full. The Mission finds that the majority of its clients are people searching for work in the harbor area. Beacon Light Mission has served the homeless population since 1946. St. Joseph's Table associated with the Catholic Mission serves the Wilmington area. St. Joseph's Table provides no overnight shelter but provides food service to 130-150 people per day. Also serving the Wilmington/San Pedro area is Rainbow Shelter, a facility for battered women and children. Rainbow Shelter provides shelter for up to 20 women and children and can refer potential clients to other similar services in Long Beach, West Covina, Carson and Hermosa Beach. Some area churches volunteer assistance to the local services and occasionally provide assistance to their members.

Housing Unit Characteristics

Housing Growth

As a nearly built-out community, residential growth has begun to slow in Rolling Hills as the supply of buildable land becomes exhausted and various constraints prohibit redevelopment of existing lots at higher densities. In 1980, the City's housing inventory included 653 housing units. Nine years later, this inventory had increased by only 30 units, for a total 1989 housing stock of 683 dwelling units. Comparing the residential growth rate in Rolling Hills with nearby jurisdictions (see Table H-5), the City's 4.5 percent increase in housing units during the 1980-1989 period was comparable to the cities of Lomita and Palos Verdes Estates. However, both Los Angeles City and the County as a whole experienced a significantly higher rate of growth than Rolling Hills, indicating that the level of growth occurring in Rolling Hills is substantially below that occurring in the region.

**TABLE H-4
HOMELESS SOCIAL SERVICE PROVIDERS**

AGENCY/PROVIDER	LOCATION	SOCIAL SERVICE SERVICE	CAPACITY
Beacon Light Mission	525 Broad Avenue Wilmington, Ca	Provides shelter and meals to men, women and families.	26 beds, increasing to 40
St. Joseph's Table/Catholic Mission	Wilmington area	Provides meals to men, women and families.	150 bed capacity
Rainbow Shelter	San Pedro	Provides shelter for battered women and children. Offers referrals to other social service agencies when full.	20 bed capacity

Source: Cotton/Beland/Associates, Inc.

TABLE H-5
HOUSING TRENDS: ROLLING HILLS AND SURROUNDING AREAS
1980-1989

Jurisdiction	Number of Housing Units		Percent Increase
	1980	1989	
Lomita	8,137	8,501	4.5%
Los Angeles City	1,190,901	1,283,889	7.8%
Palos Verdes Estates	4,880	5,095	4.4%
Rancho Palos Verdes	12,281	15,356	25.0%
Rolling Hills	653	683	4.6%
Rolling Hills Estates	2,613	2,730	0.5%
Los Angeles County	2,855,555	3,131,076	9.6%

Source: Department of Finance Controlled Population Estimates for 4-1-80 and 1-1-89.

While the limited availability of land suitable for residential development has resulted in only nominal increases in the City's housing stock, additional residential development has been occurring through redevelopment of existing units. Much of the City's housing stock was built in the 1950s, and is typified by 3,000 to 4,000 square foot ranch style homes. As in many communities with a strong market for residential development and limited available land, Rolling Hills' older housing stock is being replaced with much larger, expansive units averaging 6,000 to 8,000 square feet in size. As presented in Table H-6, in the four year period between 1985-1988, a total of 18 units were demolished in the City and replaced with newly constructed units. In addition, 23 homes underwent substantial remodeling/additions. The Community Attitude Survey confirms an extensive level of remodeling activity in Rolling Hills with approximately 15 percent of households responding indicating their residence had undergone remodeling since 1985. This trend of residential recycling can be expected to continue and potentially increase as less vacant land is available for development.

TABLE H-6
CITY OF ROLLING HILLS
RESIDENTIAL RECYCLING ACTIVITY
1985-1988

	Number of Dwelling Units		
	Zone RAS-1	Zone RAS-2	Total
Tear Downs/Rebuilds	11	7	18
Major Remodeling/Additions	15	8	23
TOTAL	26	15	41

Source: City of Rolling Hills Residential Trends Analysis, The Keith Companies, August 1988.

Housing Type and Tenure

When Rolling Hills was originally laid out by A.E. Hanson in the 1930s, its 600 acres were divided into one and two-plus acre homesites. With incorporation of the area in 1957, the City confirmed its commitment to maintaining the area's rural character through adoption of the following two residential zone districts: RA-S-1 (Residential Agriculture-Suburban Zone, one acre minimum) and RA-S-2 (Residential Agriculture-Suburban Zone, two acre minimum). These zone districts have provided for the development of an entirely single-family residential community.

The tenure distribution of a community's housing stock (owner versus renter) influences several aspects of a local housing market. Residential mobility is influenced by tenure, ownership housing evidencing a much lower turnover rate than rental housing. Housing overpayment, while faced by many households regardless of tenure, is far more prevalent among renters. Tenure preferences are primarily related to households income, composition, and age of householder.

As in any community with an exclusively single-family housing stock, the vast majority of Rolling Hills' households are owner-occupied. Approximately two percent of the City's households in 1980 were renters, with this proportion increasing to an estimated 3.9 percent according to the 1989 Community Attitude Survey. This translates to 25 renter-occupied households in 1989.

There is no subsidized housing in Rolling Hills, as confirmed by discussions with City and County staff, and through review of "Inventory of Federally Subsidized Low-Income Rental Units at Risk of Conversion" (California Housing Partnership Corporation), and the "Use of Housing Revenue Bond Proceeds - 1990" (California Debt Advisory Commission). As a result, there is no housing at risk of losing its subsidized status which must be considered for possible preservation in the Housing Element.

Vacancy Rates

An evaluation of local vacancy rates, and whether they are higher or lower than that necessary for normal residential mobility and growth, provides insight into the availability and condition of the local housing market. For instance, if vacancy rates are so high that many units stand unoccupied for prolonged periods of time, normal upkeep may be deferred. Conversely, if vacancy rates are too low, pent-up housing demand will have an inflationary impact on housing costs.

The Regional Housing Needs Assessment (RHNA) prepared by SCAG identifies an "ideal" mobility or vacancy rate of 2.04 percent for Rolling Hills housing stock; this low target vacancy is reflective of the City's single-family orientation. According to the RHNA, Rolling Hills' actual residential vacancy rate was 1.8 percent in 1987. This would indicate that while the City's housing market can be considered tight, vacancies are not significantly below that which is considered healthy by SCAG.

Age and Condition of Housing Stock

Often a good indicator of housing condition is the age of the community's housing stock. As indicated in Table H-7, the majority of Rolling Hills' housing (74%) was constructed between 1940-1969. Housing development maintained a steady pace in the 1970's, with an additional 112 dwelling units, or 16 percent of the housing stock built during this decade. Due to a diminishing supply of available land, development in Rolling Hills has slowed significantly in the 1980's, with only 34 new units constructed on vacant land between 1980-1989. As illustrated in Table H-6, an additional 18 units were developed between 1985-1988 through the demolition of existing structures, with an additional 23 units which underwent major remodeling/additions.

TABLE H-7
CITY OF ROLLING HILLS
AGE OF HOUSING STOCK; 1989

Year Built	Units	% of Total
1939 or earlier	34	5.0
1940-1949	96	14.1
1950-1959	275	40.3
1960-1969	132	19.3
1970-1974	53	7.8
1975-1978	39	5.7
1979-March 1980	20	2.9
April 1980-Jan. 1989	34	4.9
Totals	683	100.0

Note: Unit totals do not reflect residential structures which have been demolished since the 1980 census.

Source: U.S. Dept. of Commerce, Bureau of the Census, 1980 Census Report; California Dept. of Finance, Controlled Population Estimates for 1-1-89.

The accepted standard for major housing rehabilitation needs is after 30 years. With nearly 60 percent of Rolling Hills' housing stock over 30 years old, continued housing maintenance is essential. The fact that the large majority of the City's housing stock is owner-occupied, combined with the high quality of residential construction, has resulted in excellent upkeep of the City's units. A windshield survey conducted in the summer of 1989 confirms that, unlike in many other communities, the housing stock in Rolling Hills is in excellent condition. Approximately 94 percent of households responding to the resident survey indicated their residence was either in good condition, or needed only minor repairs (paint, windows repairs, etc.).

Housing Costs

For-Sale Housing: Like the three other communities (Palos Verdes Estates, Rancho Palos Verdes, and Rolling Hills Estates) which comprise the Palos Verdes Peninsula, the 1980 census identifies the median home value in Rolling Hills in its highest value category of \$200,000+; for comparison, the median sales price County-wide was \$87,400. According to Coldwell Banker's 1988 Sales Report and Property Statistics Analysis for the Palos Verdes Peninsula, the average selling price for a single-family home in 1988 was \$629,000, with prices ranging from a low of \$245,000 to a high of \$3,900,000.

These sales prices reflect the extremely high cost of land on the Peninsula, combined with strong consumer demand for the expansive luxury homes and coastal location offered.

As a private residential community which has managed to maintain its rural ambiance amidst encroaching urbanization, single family sales prices in Rolling Hills are among the highest on the Peninsula. Table H-8 presents residential sales data for 1988 and the first quarter of 1989 for Rolling Hills. The average single-family sales price in 1988 was \$1.1 million, and had increased to nearly \$1.4 million by the first quarter of 1989. Residential unit sizes were relatively modest considering the high sales prices, averaging 3,400 square feet in 1988 and 3,800 square feet in early 1989. Many of these smaller units will likely be either substantially remodeled, or completely redeveloped with larger homes.

**TABLE H-8
CITY OF ROLLING HILLS
SINGLE FAMILY RESIDENTIAL SALES**

Time Period	Sales Volume	Average Sq.Ft.	Average Sales Price	Price Range	Average Days on Market
Jan-Dec 1988	33	3,432	\$1,100,666	\$ 620,000- \$1,800,000	77
Jan-March 1989	3	3,821	\$1,383,333	\$1,150,000- \$1,650,000	35

Source: The Nelson Report: Sales Report and Property Statistics Analysis for the Palos Verdes Peninsula, 1988 and Jan-March 1989, prepared by Coldwell Banker.

Rental Housing: The vast majority of Rolling Hills' households are owner-occupied, reflective of the City's exclusively single-family housing stock which is derived from the covenants, conditions and restrictions. Approximately two percent of the City's 1980 households were renters, with this proportion increasing to an estimated three percent in 1989. Similar to housing values, the 1980 census identifies median contract rent in Rolling Hills in its highest value category of \$500+; for comparison, median contract rent County-wide was \$244.

Share of Region's Housing Needs

State law requires jurisdictions to provide for their share of regional housing needs. The Southern California Association of Governments (SCAG) has determined the 1989-1994 needs for the City of Rolling Hills, and has estimated the number of households which the City will be expected to accommodate during this period. Future housing needs reflect the number of new units needed in a jurisdiction based on households which are expected to reside within the jurisdiction (future demand), plus an adequate supply of vacant housing to assure mobility and new units to replace losses. These needs were forecast by the 1988 Regional Housing Needs Assessment (RHNA), which considered on a regional and local level: market demand for housing, employment opportunities, availability of suitable sites for public facilities, commuting patterns, type and tenure of housing need, and housing needs of farm workers.

According to the model, housing to accommodate 40 households would need to be added to the City's June 30, 1989 total households by July 1994 to fulfill the City's share of regional housing needs. Based on the distribution of regional income, this total can be further divided among HUD's four income groups to identify the types of households to be provided for as follows:

TABLE H-9
CITY OF ROLLING HILLS
1989-1994 HOUSEHOLD NEEDS BY INCOME GROUP

Very Low (0-50% County median income)	2	(5.0%)
Low (50-80% County median income)	4	(10.0%)
Moderate (80-120% County median income)	3	(7.5%)
Upper (over 120% County median income)	31	(17.5%)
Total Households	40	

Source: SCAG Regional Housing Needs Assessment, June 1988

Rolling Hills can accommodate 46 additional housing units, but unique constraints within the City may inhibit its ability to meet the needs of all income groups within the City boundaries. The City, however, shall attempt to accommodate the needs of all income groups through the actions described in the Housing Programs section of this Element.

The Housing Element sets forth policies and programs to address the future housing needs identified by the RHNA. As identified in the Element's Five Year Action Plan, programs include linkage into the local senior citizen shared housing program and the contribution of CDBG funds towards the construction of congregate housing for seniors, with the goal of addressing the City's future need for nine very low, low and moderate income households. The remaining need for 31 upper income households is accommodated under the Land Use Plan, and will be provided for through market-rate construction.

Energy Conservation

As residential energy costs continue to rise, increasing utility costs reduce the affordability of housing. The City has many opportunities to directly affect energy use within its jurisdiction. In addition to required compliance with the Building Code and Title 24 of the California Administrative Code relating to energy conservation, the City sets forth goals and policies which encourage the conservation of non-renewable resources in concert with the use of alternative energy sources to increase energy self-sufficiency. In

large part, energy savings and utility bill reductions can be realized through the following energy design standards:

Glazing - Glazing on south facing exterior walls allows for winter sun rays to warm the structure. Avoidance of this technique on the west side of the unit prevents afternoon sun rays from overheating the unit.

Landscaping - Strategically placed vegetation reduces the amount of direct sunlight on the windows. The incorporation of deciduous trees in the landscaping plans along the southern area of units reduces summer sun rays, while allowing penetration of winter rays to warm the units.

Building Design - The implementation of roof overhangs above southerly facing windows shield the structure from solar rays during the summer months.

Cooling/Heating Systems - The use of attic ventilation systems reduces attic temperatures during summer months. Solar heating systems for swimming pool facilities saves on energy costs. Natural gas is conserved with the use of flow restrictors on all hot water faucets and shower heads.

Weatherization Techniques - Weatherization techniques such as insulation, caulking, and weatherstripping can reduce energy use for air-conditioning up to 55% and for heating as much as 40%. Weatherization measures seal a dwelling unit to guard against heat gain in the summer and prevent heat loss in the winter.

Efficient Use of Appliances - Each household contains a different mixture of appliances. Regardless of the mix of appliances present, appliances can be used in ways which increase their energy efficiency. Unnecessary appliances can be eliminated, proper maintenance and use of the stove, oven, clothes dryer, clothes washer, dishwasher, and refrigerator can also reduce energy consumption. New appliance purchases of air-conditioning units and refrigerators can be made on the basis of efficiency ratings. The State prepares a list of air-conditioning and refrigerator models that detail the energy efficiency ratings of the product on the market.

Efficient Use of Lighting - Costs of lighting a home can be reduced through purchase of light bulbs which produce the

most lumens per watt, avoidance of multi-bulb fixtures and use of long life bulbs and clock timers on security buildings.

Load Management - The time of day when power is used can be as important as how much power is used. Power plants must have enough generating capacity to meet the highest level of consumer demand for electricity. Peak demands for electricity occur on summer afternoons. Therefore, reducing use of appliances during these peak load hours can reduce the need for new power plants just to meet unusually high power demands.

Actual or potential constraints on the provision and cost of housing affect the development of new housing and the maintenance of existing units for all income levels. Market, governmental, infrastructural, and environmental constraints to housing development in Rolling Hills are discussed in the following section.

Market Constraints

The extremely high cost of purchasing or renting housing is the primary constraint to providing adequate housing opportunities in Rolling Hills. High land costs, construction costs, labor costs, and market financing constraints all contribute to the increasing cost of housing in Rolling Hills.

Land

Land costs include the cost of raw land, site improvements, and all costs associated with obtaining government approvals. Like the entire Palos Verdes Peninsula, land costs are extremely high in Rolling Hills. A review of vacant parcels which sold in Rolling Hills during the 1987-1989 period reveals a price range of between \$375,000 and \$835,000 for parcels which could accommodate a single unit. In addition to raw land costs, site improvements contribute to the cost of land as most of the remaining vacant parcels in the City have severe topographic or geologic constraints, and would necessitate significant grading to accommodate development. Thus, land costs alone produce a situation where housing is not within the financial means of lower income households. The extremely high land costs would make the construction of lower income housing in the City almost impossible without governmental assistance.

Construction Costs

A major cost associated with building a new house is the cost of building materials, which can comprise up to 50 percent of the sales price of a new home. In areas like Rolling Hills where land represents a larger proportion of overall housing costs, construction costs correspondingly comprise a lesser proportion of total housing costs. Overall construction costs rose over 30 percent between 1980 and 1988, with the rising cost of energy a significant contributor.

According to the Construction Industry Research Board, construction costs for wood frame, single-family construction of average to good quality range from \$45 to \$60 per square foot. Construction costs for custom homes and units with extra amenities of excellent construction quality range from \$85 to \$95 per foot. Based on the high level of amenity associated with new construction in Rolling Hills, construction costs usually exceed even this \$85-\$95 range.

Labor Costs

Labor is the third most expensive component in building a house, constituting an estimated 17 percent of the costs of constructing a single-family dwelling. The cost of union labor in the construction trades has increased steadily since April 1974. The cost of non-union labor, however, has not experienced such significant increases. Because of increased construction activity, the demand for skilled labor has increased so drastically that an increasing number of non-union employees are being hired in addition to unionized employees, thereby lessening labor costs.

Financing

While interest rates have fallen more than nine percent from their near 20 percent high in the early 1980s, they still have a substantial impact on housing costs which is felt by renters, purchasers and developers. An additional obstacle for the first time homebuyer is the downpayment required by lending institutions of between 10-20%.

The average sales price of a single-family home in Rolling Hills in 1988 was \$1.1 million. A \$990,000 mortgage amortized over 30 years at an interest rate of 10.5% would result in monthly house payments of \$9,055, well beyond the financial means of low and moderate income households.

Contractual Constraints

Virtually all of the land in Rolling Hills is subject to the Covenants, Conditions, and Restrictions (CC&Rs) established in 1936 by the Palos Verdes Corporation. These CC&Rs set forth two classifications of property and restrict the development and use of property within each classification to either only single family or single family and limited public use. Neither classification allows for the development of multi-family housing or for commercial, office or industrial activity. The CC&Rs establish minimum parcel and dwelling unit sizes, and require approval by the Rolling Hills

Community Association Architecture Committee of all new development.

Governmental Constraints

Housing affordability is affected by factors in both the private and public sectors. Actions by the City can have an impact on the price and availability of housing in the City. Land use controls, site improvement requirements, building codes, fees and other local programs intended to improve the overall quality of housing may serve as a constraint to housing development.

Land Use Controls

Land Use Controls are established by the City's Land Use Element, Zoning Ordinance, and Community Association Building Regulations. The Rolling Hills Land Use Element provides for two residential categories: Residential Estate - one acre minimum (RA-S-1) and Residential Estate - two acre minimum (RA-S-2). Building coverage is limited to twenty percent of the net lot area, and building height is restricted to one-story, although subterranean parking and split-level residences in effect allow greater height. These height limitations reflect the requirements of the CC&Rs and therefore do not themselves constrain housing supply. A minimum of two covered parking spaces are required for each dwelling unit. This parking requirement can easily be met on the City's large residential parcels. The parking standard is appropriate given the high number of automobiles per household in Rolling Hills, and the fact that the private streets are too narrow to permit on-street parking. The City has implemented in its Zoning Ordinance standards to allow the development of mobile homes in its residential zones.

The City defines a "second unit" as a detached or attached dwelling unit which provides complete, independent living facilities for one or more persons including permanent provisions for living, sleeping, cooking, and sanitation, on the same parcel as the primary residential structure. As provided for under State law, the City of Rolling Hills has adopted an ordinance which prohibits second units on single-family lots; a copy of this ordinance is contained in the Appendix to the Housing Element. The ordinance makes the following findings which specify the adverse impacts on public health, safety and welfare which would result from allowing second units, and which justify their preclusion in Rolling Hills:

- *Lack of Sewers* - Development of second units could potentially double the amount of sewage effluent currently entering the soil, thereby exacerbating soil stability problems.
- *Geologic Setting* - Numerous active landslides in Rolling Hills greatly diminish development potential and call for caution in increasing densities.
- *Rural Design and Community Roadway Character* - The current capacity, design, and topographic constraints of the City roadways indicate increased residential densities would compromise traffic safety.
- *Fire Flow Requirements* - The introduction of second units in Rolling Hills would change the infrastructure requirements on water pressure in the City, and as the City has no funds to revamp the water system, fire fighting capabilities would be compromised due to reduction in water pressure.

The existing zoning standards maintain the rural character of the area and respond to unique physical, health, and safety aspects of the City. Because Rolling Hills is limited to large lot residential land uses, opportunities for affordable housing are limited. However, the Land Use Plan provides a development capacity which is more than adequate to meet the City's future five-year share of regional housing needs, defined as 40 units by the RHNA.

Development in Rolling Hills is controlled through both City enforced zoning and privately enforced CC&Rs. City zoning does not in itself constrain housing development. Reducing zoning standards or increasing densities would not modify the development limitations dictated by the CC&Rs, which control density. City zoning standards are considered to be appropriate given the topographic, geologic, and infrastructure constraints in the City.

Fees and Improvements

Various fees and assessments are charged by the City and other agencies to cover the costs of processing permits and providing services and facilities, such as utilities, schools, and infrastructure. Almost all of these fees are assessed through a pro rata share system, based on the magnitude of the residence's impact or on the extent of the benefit which will be derived.

The Rolling Hills jurisdiction is a private, suburban community, with the majority of its necessary infrastructure, such as streets, electrical and water facilities, already in place. As such, the cost of land improvements is less than in rural areas, but significantly higher than those found in urbanized jurisdictions. Table H-10 presents a list of development fees (September 1989) associated with the construction of a single-family residence in Rolling Hills. Fees have been set at a level necessary to meet the City's costs and high level of amenity.

Permit and plan review fees charged in the City are based on the actual costs incurred by the City. Review and permit processing in Rolling Hills may be more time consuming than in other communities because of the concern with geologic and structural stability, the customized character of Rolling Hills homes, and individual permit processing for each residential unit. To reduce development fees below the costs actually incurred by the City would represent a subsidy, which is not within the financial means of the City. However, if an affordable housing development is proposed in the City and the City's permitting and review fees present an obstacle to that development, the City will consider waiving those fees as a means of facilitating such development.

Building Codes and Enforcement

The Los Angeles County Building Code governs standards for construction in Rolling Hills. These codes are considered to be the minimum necessary to protect the public health, safety and welfare. However, as the remaining vacant land in Rolling Hills is characterized by steep topography and in some cases geologic instability, the necessary enforcement of building codes to address these constraints can significantly add to the cost of housing.

Local Processing and Permit Procedures

The evaluation and review process required by City procedures contributes to the cost of housing in that holding costs incurred by developers are ultimately manifested in the unit's selling price. The review process in Rolling Hills is governed by two levels of decision-making bodies: the City Council and Planning Commission.

TABLE H-10
CITY OF ROLLING HILLS
SUMMARY OF RESIDENTIAL DEVELOPMENT FEES
(November 1989)

Type of Fee	Cost
Building Permit	2-1/2 times the amount set in the County Building Code.
Plan Check Fees	Based upon building valuation. Assessed by County of Los Angeles.
Plumbing, Mechanical, and Electrical Permits	County assessment based upon the number of fixtures, outlets, switches, and panels. City fee is 2-1/2 times the amount set forth by the County.
Park and Recreation Fund Fee	Each new residence pays 2% of the first \$100,000 in building valuation, plus an additional .5% for the remaining balance.
School Fee	\$1.50 per square foot of habitable living space.
Site Plan Review	\$1,500.
Water Service	Option 1: \$600 Hydrant Meter Deposit, plus service charge for the amount of water used during construction. Option 2: No hook-up fee. Meter fees determined by the size of meter and the number of fixtures. Does not include service charge for amount of water used during construction.

Sources: City of Rolling Hills;
County of Los Angeles, Dept. of Building & Safety;
Palos Verdes Peninsula Unified School District;
California Water Service Company.

Table H-11 provides an overview of the time requirements and fees associated with processing residential applications in Rolling Hills. All applications ranging from non-city initiated code amendments to site plan review must be submitted to the City's Planning Department. After Planning staff reviews the applications for completeness, all submittals then appear before the Planning Commission which serves as the decision-making body on planning procedures. All appeals to decisions are heard and decided by the City Council. Since the City of Rolling Hills is largely built out, the majority of procedural submittals are for rebuilt single-family dwellings and additions to existing structures.

In addition to submitting applications to the City for building permits and site plan review, the developer must also submit plans to the Los Angeles County Building and Safety Department for building and grading plan checks. Applications for City and County procedures can be submitted concurrently. Approximately two to three months are required to complete project processing, a comparable review period for single-family development in most other southern California jurisdictions. Processing times for City permits do not represent a significant constraint on development. In addition, the City currently contracts with consultants for planning services, and could expand consultant responsibility to include project processing should the need arise in the future.

Absence of Government Funding

Development of affordable housing in Rolling Hills would require extraordinary financial assistance to develop. Assuming the other constraints previously discussed could be eliminated, potential sources of such assistance and the applicability to Rolling Hills must be examined. A summary of existing state and federal housing assistance programs and the availability for use in Rolling Hills is provided as an appendix to the Housing Element.

The availability of Federal and State funding sources is subject to many limitations. Many types of government assistance are conditioned upon the existence of populations in need of assistance or housing stock conditions requiring repair or rehabilitation. The absence of in need populations and deteriorated housing in Rolling Hills renders the City ineligible for many types of assistance. In addition, high rental values in the City preclude the use of the Section 8, Housing Voucher Assistance Payments Program. Under that program, the Department of Housing and Urban Development (HUD) provides subsidies to landlords under certain conditions. Only housing units with rents at or below maximum rent levels are

TABLE H-11
CITY OF ROLLING HILLS
TIME REQUIREMENTS AND FEES FOR RESIDENTIAL PROCESSING

Request	Fee
Non-City Initiated Code Amendment	\$2,500
Zone Change	\$2,500
Minor Setback (10') Variance	\$1,000
All Other Variances	\$1,250
Conditional Use Permits	\$1,500
<p>Project processing for these five procedures does not begin until a complete application has been received. Site Plans, Public Notification Lists, and an Initial Environmental Evaluation must also be submitted. Three public meetings are required: an initial open meeting before the Planning Commission, and public hearings at the Planning Commission and City Council level. Processing time for each of the five procedures is approximately two months. Applications can be submitted concurrently.</p>	
Site Plan Review	\$1,500
<p>New single-family homes, grading projects, and additions to structures that exceed 25% of the existing square footage are subject to Site Plan Review. Two meetings are required: an initial hearing before the Planning Commission, and a second public hearing in which the Planning Commission renders its decision. All decisions can be appealed to City Council. Approximate processing time is 75 days.</p>	

Source: City of Rolling Hills.

eligible to receive subsidies. Rents in the City far exceed maximum allowable levels payable under the Section 8 Program.

One source of housing assistance used by many local governments is money derived from redevelopment project tax increment. This source is unavailable, however, because the City has no redevelopment areas and the absence of blight in the City precludes the formation of a redevelopment area. The City's limited financial resources further precludes the use of City General Fund monies for housing assistance.

The absence of federal, State and local funding sources for affordable housing in Rolling Hills (refer to table in Appendix A), coupled with the high cost of land and construction, act as a significant constraint to the provision of affordable housing in the City. Private financing of affordable housing is also unlikely given the low densities required by the CC&Rs and by the topography of the City.

Environmental and Infrastructure Constraints

Portions of Rolling Hills are exposed to a variety of environmental hazards which may constrain the development of lower priced residential units. In addition, inadequate infrastructure may also act as a constraint to residential development.

Hillside/Slopes

Rolling Hills may be described as having the most severe terrain of any jurisdiction in Los Angeles County. Slopes of 25 to 50 percent are present on virtually every remaining undeveloped parcel in the City. Development on such severely sloped parcels requires substantial modification to the natural terrain which significantly adds to the cost of development. The extreme topography present in Rolling Hills serves as a significant constraint to the development of affordable housing. As a means of preventing erosion and landslides and preserving Rolling Hill's natural hillside topography, the City's Site Review Ordinance prohibits extensive grading and recontouring of existing terrain. The City has adopted the County's grading standards with some modifications necessary to ensure slope stability. The City's cut and fill provisions require balance on site, which is necessary because export of material is not practical given the narrowness of streets in the City. The Rolling Hills Community Association also restricts the use of streets for soil export due to the impact on street condition and on public safety.

Landslides

Rolling Hills experiences a recurring problem of landslides which damage or destroy homes and present risks to human health and safety. Numerous active landslides in the City presently render significant areas of the City unsafe for development. The danger of increased soil instability particularly if higher density development is constructed, would contribute to potential risk to human life as well as to physical improvements. A map of past landslides is contained in the Safety Element. Building at the head of a landslide can decrease the bedrock strength along an existing or potential rupture surface and "drive" the landslide down slope. Improper grading practices can also trigger existing landslides. The Safety Element sets forth policies to restrict new development and expansion of existing development in areas susceptible to landsliding unless this hazard can be adequately mitigated.

Street System

Rolling Hills has no public roads or streets. Use of privately owned roadways requires approval of the Rolling Hills Community Association. The City's privately-owned road network is typified by winding roads with a 25 foot paved cross-section lacking in curbs, gutters, or sidewalks. Road width, coupled with steep grades and private roadways, effectively precludes public transit within the City. The City's circulation infrastructure is basically not conducive to higher density housing.

Wastewater Disposal

With the exception of the eight residences which individually or through the creation of a small sewer district have hooked in with adjacent jurisdiction's sewer systems, there is no sanitary sewer system in Rolling Hills. Residences are served by individual septic tanks and leach lines. Insofar as the City remains on a septic system, this will prevent the development of higher density housing, including the construction of second units. The City is currently in the process of working with a group of five homeowners in the John's Canyon area located on the City's western periphery to establish a privately financed sewer district to be linked in the County system. However, there is only limited potential for additional sewer districts due to the prohibitive cost associated with sewerage residences at further distances from County sewer lines, and the inability of the City to subsidize these costs.

This section of the Housing Element evaluates future housing opportunities in Rolling Hills in relation to the City's housing needs.




Residential Land Inventory




In order to assess future residential development potential in Rolling Hills, an inventory of residentially-zoned vacant parcels has been prepared and evaluated in terms of the actual capability of parcels to accommodate residential development. In addition, large parcels which are currently developed but which have the potential for further subdivision have also been evaluated. With the majority of the City's developable residential acreage already built out, many of the remaining vacant parcels are characterized by physical constraints which preclude their development. These constraints are primarily related to severe topography and/or existing landslides. Of the total 203 acres of vacant residential land identified in the Land Use Element, approximately 172 acres are physically suitable to accommodate residential development.

Figure H-1 illustrates those parcels which have been identified as appropriate for residential development; Table H-12 quantifies the number of dwelling units which could be accommodated on these parcels. All of these parcels are subject to CC&Rs. Vacant parcels have been separated into two categories - individual parcels which can accommodate a single unit and larger parcels with the potential to subdivide into several smaller parcels. A single 63 acre parcel known as Storm Hill provides the most significant opportunity in the City for potential subdivision, accommodating a net increase in approximately 25 dwelling units. Several larger developed parcels also offer the opportunity for further subdivision, as confirmed by subdivision inquiries received by the City. Aggregating the development potential on both vacant and underutilized parcels, a total of ten additional residential dwellings can be accommodated in the City's RA-S-1 zone, with the potential for an additional 49 dwellings in the RA-S-2 zone.

Non-residential properties in Rolling Hills are limited to public and institutional uses. None of these uses are anticipated to be redeveloped within the time frame of this element.



-  Vacant
-  Vacant, Subdividable
-  Developed, Subdividable

  North  1200
scale in feet

SOURCE: City of Rolling Hills, December 1989.



Figure H-1
Site Inventory For
Residential Development

DECEMBER 23, 1991

**TABLE H-12
CITY OF ROLLING HILLS
FUTURE RESIDENTIAL DEVELOPMENT POTENTIAL**

MAXIMUM POTENTIAL INCREASE IN DUs				
Zone	Vacant	Vacant/ Subdividable	Developed/ Subdividable	Total
RA-S-1	10			10
RA-S-2	9	28	12	49
TOTAL	19	28	12	59

Source: City of Rolling Hills

Residential Development Potential Compared With Future Growth Needs

As indicated in the Housing Element section "Share of Region's Housing Needs", the Regional Housing Needs Assessment (RHNA) prepared by SCAG identifies a future housing need for Rolling Hills of 40 units to be developed over the next five years (1989-1994). The residential land inventory identifies the potential for development of 59 additional single-family dwelling units on unconstrained land, indicating the City's General Plan and zoning provide for a residential development capacity more than adequate to accommodate the City's share of regional housing needs.

SUMMARY OF HOUSING ISSUES AND OPPORTUNITIES

The following housing issues and opportunities have been identified as part of the General Plan Update and are addressed in the Housing Element goals, policies and programs.

- With the majority of the City's developable acreage already built out, many of the remaining vacant parcels are characterized by physical constraints which preclude their development.
- Virtually every parcel in Rolling Hills which is considered developable contains slopes of 25 to 50 percent, presenting a significant constraint to the development of higher density housing.
- Land costs are extremely high in Rolling Hills and produce a situation where opportunities for the development of housing affordable to lower income households are very limited.
- The Rolling Hills Land Use Plan accommodates a total of 59 additional dwelling units on unconstrained land in the City. The Plan's development potential is thus adequate to meet the City's five year share of regional housing needs, which has been identified by SCAG as 40 dwelling units.
- The City could address the housing needs of its significant elderly population by contributing seed monies for congregate housing facilities, coordinating with local shared housing service providers, and coordinating with providers of equity conversion programs.

The prior chapters in the Housing Element establish the housing needs, opportunities, and constraints present in Rolling Hills. The Housing Plan presented in the following chapter sets forth the City's goals, policies and programs to address Rolling Hills' identified housing needs.

Evaluation of Accomplishments Under Existing Housing Element

State Housing Element law now requires communities to assess the achievements under adopted housing programs as part of the five year update to their housing elements. These results should be quantified where possible (e.g. new construction results) but may be qualitative where necessary (e.g. mitigation of governmental constraints). These results are then compared with what was projected or planned in the earlier element. Where significant shortfalls exist between what was planned and what was actually achieved, the reasons for such differences are discussed.

The City of Rolling Hills prepared a comprehensive update to its Housing Element in 1981. In compliance with the July 1984 deadline for review and update, the City prepared a memorandum which reviewed the accomplishments to date under adopted housing programs; no additional programs were set forth under this 1984 Housing Element review. The following section re-examines the progress made towards implementing the City's housing programs as set forth in the 1981 Housing Element. The results of this analysis have been utilized to refine and augment the City's housing programs to develop an overall strategy to adequately address the community's housing needs.

1. **Existing Program:** Provide an overlay zone classification which may be applied to appropriate areas for housing for low and moderate income elderly based on proximity to commercial services, public transit, and other services.

Accomplishment: Environmental constraints present on the City's remaining vacant parcels, combined with extreme land costs, preclude the development of multi-family/affordable housing in Rolling Hills. Due to these factors, the concept of an affordable housing overlay zone is no longer an appropriate program for the City's Housing Element.

2. Existing Program: Permit manufactured or mobile homes on all buildable, single family lots in the City.

Accomplishment: The City has amended its Zoning Ordinance to provide for manufactured homes, mobile homes and trailers.

3. Existing Program: Provide low and moderate income housing in the City of Lomita through pooling of area block grant monies.

Accomplishment: The City of Rolling Hills contributes its annual allotment of CDBG funds to the City of Lomita to be used expressly for the construction of congregate housing for lower income seniors. The City's contribution of approximately \$10,000 per year has enabled the construction of the following two senior housing projects in Lomita:

- a) 78 rental units for low income elderly or handicapped individuals at 24925 Walnut Street, Lomita
- b) 67 rental units for low income elderly or handicapped individuals at 25109 Ebony Lane, Lomita

Additionally, for the past several years Rolling Hills' CDBG contributions have been set aside to go towards the acquisition of land for a construction of a third senior housing project. The City of Lomita expects to acquire this property by June 1990 and will construct 25 low income elderly/disabled rental units on the site.

4. Existing Program: Participate in regional low and moderate income housing programs.

Accomplishment: The City participates in regional low and moderate income housing programs through joining other neighboring cities in pooling financial resources to construct low cost housing in the greater community. In addition, the City has met with representatives of other jurisdictions to discuss cooperative housing strategies.

5. Existing Program: Solicit the private sector's involvement in providing affordable housing.

Accomplishment: The City has amended its Zoning Ordinance to provide density bonuses for developers wishing to build low and moderate income housing in Rolling Hills.

6. Existing Program: Encourage developers to construct low and moderate income housing by providing a density bonus of 25 percent over the otherwise allowable units permitted when the developer provides at least 25 percent of the total number of units in a housing development for persons of low or moderate income.

Accomplishment: The City's Zoning Ordinance has been amended accordingly.

7. Existing Program: Encourage developers to construct housing for persons of low or moderate income by providing developmental incentives.

Accomplishment: The City has amended its Zoning Ordinance to provide density bonuses for developers wishing to build low and moderate income housing in Rolling Hills.

8. Existing Program: Encourage housesharing for those residents who no longer needs a large residence.

Accomplishment: Seniors in Rolling Hills utilize two nearby shared housing programs - South Bay Senior Services in Torrance and Anderson Center in San Pedro - which assist seniors in locating roommates to share existing housing in the community.

9. Existing Program: Control grading in new and existing development.

Accomplishment: The City has adopted a Site Plan Review Ordinance which, among other things, regulates grading practices to ensure compatibility with the existing natural setting. Planning Commission approval of a project's site plan review application is required before a grading permit will be issued.

10. Existing Program: Provide programs for minor home repairs.

Accomplishment: The City's housing stock is in excellent condition and the vast majority, if not all, of the City's residents have the financial means to ensure adequate upkeep to their homes. This program is not appropriate to Rolling Hills.

11. Existing Program: Promote neighborhood beautification activities.

Accomplishment: Both the City and the Rolling Hills Community Association undertake neighborhood beautification activities on an ongoing basis in the community.

12. Existing Program: Establish open space hazard zones to protect the health and safety of present and future residents.

Accomplishment: As part of the City's General Plan Update, a Landslide Hazard overlay designation for the Flying Triangle is being developed to provide consistency with the City's restrictions on development in unstable geological areas.

13. Existing Program: Allow repair of structures and remedial grading within the landslide moratorium area.

Accomplishment: The City's updated Safety Element sets forth policy to allow for hazard mitigation and slope maintenance plans for existing and continuing development in hillside areas.

14. Existing Program: Allow temporary mobile homes on landslide sites where existing residential structure is uninhabitable.

Accomplishment: The City's Zoning Ordinance has been modified to accommodate temporary mobile homes on landslide sites where the existing structure is uninhabitable.

Goals and Policies

The City of Rolling Hills adopted a series of goals and policies as part of its 1981 Housing Element to guide the development and implementation of its housing program. As part of the current General Plan update, these adopted goals and policies were reviewed with the General Plan Advisory Committee as to their appropriateness in addressing the community's housing needs. The following goals and policies reflect a revision to those previously adopted to incorporate community input and to reflect what has been learned from the prior element. These goals and policies will serve as a guide to City officials in daily decision making.

GOAL 1: Provide for housing which meets the needs of existing and future Rolling Hills' residents.

Policy 1.1: Evaluate ways in which the City can assist in providing housing to meet special community needs.

Policy 1.2: Work with governmental entities to explore the possibility of providing affordable housing for low and moderate income and senior citizen households in the South Bay region.

Policy 1.3: Continue to contribute Community Development Block Grant funds to nearby cities for the development of congregate housing for seniors.

Policy 1.4: Encourage the development of residential units which are accessible to the handicapped or are adaptable for conversion to residential use by handicapped persons.

Policy 1.5: Encourage the use of energy conservation devices and passive design concepts which make use of the natural climate to increase energy efficiency and reduce energy costs.

Policy 1.6: Continue to facilitate the development of housing in the City, taking into account existing financial, legal, and environmental constraints.

GOAL 2: Maintain and enhance the quality of residential neighborhoods in Rolling Hills.

Policy 2.1: Encourage and assist in the maintenance and improvement of existing neighborhoods to maintain optimum standards of housing quality and design.

Policy 2.2: Require the design of housing to comply with the City's building code requirements.

Policy 2.3: Require compatible design to minimize the impact of residential redevelopment on existing residences.

Policy 2.4: Enforce City housing codes and cooperate with the Rolling Hills Community Association to assure the upkeep and maintenance of housing in the City.

GOAL 3: Provide housing services to address the needs of the City's senior citizen population.

Policy 3.1: Provide reference and referral services for seniors, such as in-home care and counseling for housing-related issues, to allow seniors to remain independent in the community.

Policy 3.2: Coordinate with existing agencies providing shared housing programs in nearby cities as an option for seniors to share existing housing in the community.

Policy 3.3: Coordinate with lending companies and institutions to educate the City's elderly homeowners as to the availability of reverse mortgage loans which allow income-poor seniors to remain in their homes.

GOAL 4: Promote housing opportunities for all persons regardless of race religion, sex, marital status, ancestry, national origin or color.

Policy 4.1: Affirm a positive action posture which will assure that unrestricted housing opportunities are available to the community, and enforce all applicable laws and policies pertaining to equal housing opportunity.

Policy 4.2: Make information on fair housing laws available to residents and realtors in the City.

Policy 4.3: Investigate any allegations of violations of fair housing laws.

Implementing Programs

The goals and policies set forth in the Housing Element to address the City's housing needs are implemented through a series of housing programs. The Housing Element program strategy consists of both programs currently in use in the City and additional programs to provide the opportunity to adequately address the City's housing needs. The following section provides a brief description of each program, five year quantified objectives, funding source, responsible agency and implementation time frame.

Shared Housing

Many seniors who prefer to live independently resort to institutionalized living arrangements because of security problems, loneliness, or an inability to live entirely independently. Seniors in Rolling Hills have access to two nearby shared housing programs - South Bay Senior Services in Torrance and Anderson Senior Center in San Pedro - which assist seniors in locating roommates to share existing housing in the community. These programs make roommate matches between seniors based on telephone requests. South Bay Senior Services frequently receives calls from seniors in Rolling Hills in search of other seniors to rent guest cottages or second units attached to the main residence, and has located roommates for several of the City's elderly homeowners. The City can more actively market the availability of these shared housing programs by providing informational brochures at the public counter.

Quantified Objective: Develop informational brochures advertising existing shared housing programs to increase the number of roommate matches to ten over the 1989-1994 period.

Funding Source: City budgets.

Responsible Agency: City Planning Department.

Implementation Time Frame: Two Years.

Reverse Mortgage Program

The most substantial asset of most elderly homeowners is their home, which in Rolling Hills has increased significantly in value with inflation. But while owning a home in Rolling Hills may provide a rich asset base, the onslaught of retirement and a fixed income can cause many elderly homeowners to quickly become income poor. Home maintenance repairs multiply as the home ages, and with rising costs in home utilities, insurance, and taxes, housing maintenance often gets deferred.

An alternative option for elderly homeowners is to draw needed income from the accumulated equity in their homes through a reverse mortgage. A reverse mortgage is a deferred payment loan or a series of such loans for which a home is pledged as security. Qualification for the loan is based primarily on property value rather than income, allowing the elderly homeowner on a fixed income to receive a loan for which he or she would not otherwise qualify. Most reverse mortgage programs permit homeowners to borrow up to 80 percent of the assessed value of their property, to receive needed principal of up to 25 percent of the loan, and then to receive monthly annuity payments for the life of the loan.

Reverse mortgages may offer a viable financing alternative to many of Rolling Hills' elderly homeowners. The City can help to inform its senior population as to the availability of reverse mortgages by providing educational brochures, as well as referral services, to those seniors interested in pursuing a reverse mortgage. Based on available information, the following companies and lending institutions are known to offer reverse mortgage loans in the Los Angeles area.

1. Security Pacific National Bank, City of Downey (213) 869-1056,
2. Capital Holding 1-(800)-431-8100,
3. Providential Home Income Plan (714) 793-2309,
4. American Homestead 1-(800)-233-4762.

Quantified Objective: Provide informational brochures at the public counter, and offer referral services to seniors interested in pursuing a reverse mortgage.

Funding Source: None necessary.

Responsible Agency: City Planning Department.

Implementation Time Frame: Two years.

Congregate Housing for Seniors

Based on the infeasibility of senior housing development in Rolling Hills due to land costs and environmental constraints, the City contributes its annual allotment of CDBG funds to the City of Lomita to be used expressly for the construction of housing for lower income seniors. The City's contributions have facilitated the construction of two low income/senior housing projects and will go towards the purchase of land for a third senior housing facility. As this housing is located outside the City of Rolling Hills' jurisdiction, under State law it cannot

be counted towards the City's regional share of housing needs. Nonetheless, this housing provides congregate housing opportunities for Rolling Hills' senior citizen households, and thereby addresses a special housing need in the City. Rolling Hills will continue to contribute its CDBG funding to nearby jurisdictions to facilitate the development of congregate housing for seniors.

Quantified Objective: Increase the available supply of congregate housing units for seniors.

Funding Source: U.S. Dept. of Housing and Urban Development/Los Angeles County Community Development Commission

Responsible Agency: City Planning Department

Implementation Time Frame: Ongoing

Assessment Fee Program

To encourage the availability of low income housing, the City will actively encourage and assist the Rolling Hills Community Association to develop a program to reduce, eliminate or defer the Association's assessment fees for low and moderate income households. Even though Rolling Hills residents with low reported incomes likely have high wealth reserves, these households may have difficulty making their assessment payments.

Quantified Objective: Develop program to help residents having difficulty making assessment payments.

Funding Source: City Budgets.

Responsible Agency: City Planning Department.

Implementation Time Frame: Three Years.

Code and CC&R Enforcement

One factor contributing to the high levels of maintenance of Rolling Hills homes and neighborhoods is the cooperative work of the Rolling Hills Community Association and the City. The Architectural and the Landscape committees of the Association continuously monitor the City to ensure compliance with CC&Rs and relevant City codes and regulations. In the event that a violation of City codes or regulations is discovered, the City works with the Association to cure the violation.

Quantified Objective: Continue code enforcement efforts.

Funding Source: City Budgets.

Responsible Agency: City Planning Department.

Implementation Time Frame: Ongoing.

Facilitate New Construction

The City will continue to work with and assist housing developers and builders to enable new housing to be built in the City. The unique geographic and infrastructure constraints in the City require high levels of cooperation between City staff and developers and builders. Continued cooperation will facilitate the construction new housing to allow the City to meet its total regional share allotment of new housing.

Quantified Objective: The development of Rolling Hill's regional share of 40 housing units as established by SCAG in January, 1989.

Funding Source: City Budgets.

Responsible Agency: City Planning Department.

Implementation Time Frame: 1989-1994.

Facilitate Repair and Remodeling Activities

Landslide damage has, and may continue to necessitate repair work on damaged homes in the City. In addition, many homeowners have instigated extensive home remodeling which has lead to significant increases in the value and quality of existing housing stock. Both repair and remodeling activities are expected to continue. City staff has been active in facilitating the permitting process for remodeling and repair work and will continue to provide this assistance.

Quantified Objective: Assist all applicants for remodeling repair permits.

Funding Source: City Budgets.

Responsible Agency: City Planning Department.

Implementation Time Frame: Ongoing.

Density Bonus Program

Pursuant to State density bonus law (section 565915-65918 of the Government Code), if a developer allocates at least 20% of the units in a housing project to lower income households, 10% for very low income households, or at least 50% for "qualifying residents" (62 years of age or older, or 55 years of age or older in a senior citizen housing project), the City must either: a) grant a density bonus of 25%, along with one additional regulatory concession to ensure that the housing development will be produced at a reduced cost, or b) provide other incentives of equivalent financial value based upon the land cost per dwelling unit.

Should the City receive a development application for a low income density bonus project which otherwise complies with zoning and CC&R restrictions, the City will approve the density bonus as a mechanism of providing affordable housing.

Quantified Objective: Grant bonuses on all qualified projects.

Funding Source: City Budgets.

Responsible Agency: City Planning Department.

Implementation Time Frame: Ongoing.

Ground Instability

Continue to explore possible solutions to ground instability problems. The City has had to impose a moratorium on development in certain areas because of landslide risks. The City is currently analyzing this problem to determine ways to eliminate these risks. One solution being implemented is continued analysis of conditions in the City.

Quantified Objective: Continue to work with geotechnical consultants to establish construction regulations and to explore other potential solutions to problem.

Responsible Agency: City Planning Department and City Manager's Office.

Implementation Time Frame: Ongoing.

Funding Source: City Budgets.

Neighborhood Sponsored Sewer Districts.

Promote and facilitate the development of homeowner sponsored sewer districts. Financial constraints currently prohibit the development of a public sewer system in Rolling Hills. Costs for sewer services through the County's system are prohibitively expensive, due to both the great distance to the County sewer lines, and the distance between homes, and beyond the City's financial means to subsidize. Requiring all homeowners to bear such a significant cost could create hardships for homeowners and would increase the cost of housing in the City. The City is in the process of coordinating with a group of five homeowners to develop a sewer district that will be hooked up to the County system. This proposed sewer district is located in John's Canyon on the City's western periphery, rendering it more feasible than other locations in the City at a greater distance from County sewer lines.

Quantified Objective: Complete development of district.

Responsible Agency: City Planning and City Manager's Office.

Implementation Time Frame: Two years.

Funding Source: City Budgets.

Housing Repair and Temporary Shelter on Landslide Sites

The City will continue to allow the repair of damaged structures and remedial grading in landslide areas. The use of temporary mobile homes on landslide sites will also continue to be permitted. (Mobile homes are permitted in all the City's residential zones.)

Quantified Objective: Assist all persons qualified.

Responsible Agency: City Planning Department.

Implementation Time Frame: Ongoing.

Funding Source: City Budgets.

Fair Housing Program

As a participating City in the Urban County Community Development Block Grant Program, Rolling Hills cooperates with the Fair Housing Congress of Southern California through the Long Beach Fair Housing Foundation to enforce fair housing laws. As a means of increasing public awareness of legal rights

under fair housing laws, the City will advertise services offered by the Fair Housing Foundation, including housing discrimination response, landlord-tenant relations, housing information and counseling, and community education programs.

Quantified Objective: Provide informational brochures at the public counter and local library, and place periodic advertisements in the local newspaper.

Funding Source: CDBG, City budgets.

Responsible Agency: City Planning Department.

Implementation Time Frame: One Year.

Summary of Five-Year Program Goals

Number of Units to be Constructed: 40 single-family units

Number of Units to be Rehabilitated: 0 rehabilitation need

Number of Units to be Conserved: 683 single-family housing units

APPENDIX A

Federal and State Housing Programs and Their Applicability in Rolling Hills

FEDERAL AND STATE HOUSING PROGRAMS AND THEIR APPLICABILITY IN ROLLING HILLS

<u>Program</u>	<u>Comments</u>
FEDERAL PROGRAMS	
Section 8 Existing	Provides rent subsidies to low-income renters. This source cannot be used in Rolling Hills because rents on housing in the City far exceed maximum rent levels required for participation in the program.
Section 8 Moderate Rehabilitation	Provides for payment contracts on units needing substantial rehabilitation. This source is inapplicable in Rolling Hills because no housing in the City has been identified as in need of rehabilitation.
Section 8 New Construction	Provides funding for the construction of housing affordable to lower-income persons. High land costs and legal and environmental constraints preclude the development of projects in Rolling Hills that would be eligible for such funding.
Section 202	Provides funding for senior housing. High land costs and legal and environmental constraints make the development of projects that would be eligible for such funding infeasible in Rolling Hills.
Section 106(b) - Seed Money Loans	Provides interest free loans to non-profit housing sponsors for preconstruction costs. Currently used only in connection with Section 202 above.
Community Development Block Grant (CDBG)	Provides funding for a wide range of community development activities. Rolling Hills maximizes its use of these funds by using them to help fund senior housing in areas where land is less expensive than in the City, thereby allowing more people to be helped through limited funds.

FEDERAL AND STATE HOUSING PROGRAMS (continued)

<u>Program</u>	<u>Comments</u>
STATE PROGRAMS	
SB 99-Redevelopment Construction Loans	Authorizes issuance of bonds by redevelopment agencies. Rolling Hills does not have a redevelopment agency, or any areas which could be defined as blighted.
California Housing Finance Agency (CHFA) -Direct Lending	Provides loans to housing sponsors for construction or rehabilitation of housing projects containing over five units. Program could be applied for by Rolling Hills developers but projects of the five unit minimum can not be built in the City because of legal and environmental constraints.
California Housing Finance Agency (CHFA) Home Ownership and Home Improvement (HOHI) Program	Provides financing for rehabilitation and purchase of housing by low and moderate income persons for housing in areas that are in need of rehabilitation. Absence of housing in need of rehabilitation precludes use in Rolling Hills.
California Self-Help Housing Program	Provides grants and loans to assist low and moderate income families build and rehabilitate their own homes. High land costs and home values make use of this program in Rolling Hills unlikely.
Mobile Home Park Assistance	Provides financial and technical assistance to mobile home park residents. No mobile homes exist in Rolling Hills.
Emergency Shelter	Provides grants for homeless shelters. No population in need of homeless shelter exists in Rolling Hills.
Special User Housing Rehabilitation	Program targeted towards substandard housing. No substandard housing exists in Rolling Hills.

FEDERAL AND STATE HOUSING PROGRAMS (continued)

<u>Program</u>	<u>Comments</u>
Predevelopment Loans	Provides predevelopment loans for low income housing projects. This source could be used by nonprofit developers in the City. However, high land costs, and environmental and legal constraints render infeasible the development of eligible projects in the City.
Senior Citizen Shared Housing	Provides grants to assist seniors to find shared housing arrangements. Rolling Hills provides this service using local funds.
Rental Housing Construction	Provides cash grants for the construction of housing developments containing at least five units with 30 percent of the units affordable to lower income households. Environmental and legal constraints on the development of multi-family housing in the City render this inapplicable.
Deferred Payment Rehabilitation Loans	Provides loans for the rehabilitation of low and moderate income housing. Not applicable in Rolling Hills because of absence of targeted housing.
Marks Foran Rehabilitation Loans	Allows revenue bonds for housing rehabilitation. The City does not have housing in need of rehabilitation.
AB 1151-Density Bonuses	Requires local governments to offer density bonuses or other incentives in exchange for the development of low income housing. The City has not adopted its own density bonus program but will follow state requirements on a case-by-case basis.
AB 655-Multi-Family Revenue Bonds	Allows for participation in a County-wide bond program for low income multi-family housing. Legal and environmental constraints on multi-family housing in Rolling Hills would make it very difficult to build housing meeting the rent requirements of this program.

FEDERAL AND STATE HOUSING PROGRAMS
(continued)

<u>Program</u>	<u>Comments</u>
Single-Family Mortgage Revenue Bonds	Allows for the issuance of bonds for below market loans for low and moderate income homebuyers. The high costs of homes in the City make them unaffordable to persons targeted in this program.
Redevelopment-Tax Increment Financing	Allows local agencies to keep increases in taxes for redevelopment areas. This is inapplicable to Rolling Hills because there are no blighted areas which could qualify for redevelopment.

APPENDIX B

Second Unit Ordinance

D. The geological report prepared by the independent registered geologist shall recommend corrective action which is designed to prevent the displacement or slippage of the land. (Ord. 178 §2, 1980).

15.40.030 Corrective action required when. As a condition to the issuance of a permit by the City Engineer of the City, the corrective action or procedures recommended in the geological report shall be incorporated in the proposed construction or grading for which the permit has been applied. (Ord. 178 §3, 1980).

15.40.040 Assessment of costs. All expenses incurred by the applicant in complying with the provisions of this chapter shall be paid for by the applicant and shall be in addition to all other charges or fees levied, assessed or charged by the City in connection with the issuance of a building or grading permit. (Ord. 178 §4, 1980).

Chapter 15.44

SECOND UNITS ON SINGLE-FAMILY LOTS

Sections:

- 15.44.010 Prohibition.
- 15.44.020 Findings.
- 15.44.030 Limitation on housing opportunities.

15.44.010 Prohibition. Second units on single-family lots are prohibited within the City for the reasons set forth in Section 15.44.020. For the purposes of this Chapter, "second unit" means a detached or attached dwelling unit which provides complete, independent living facilities for one or more persons including permanent provisions for living, sleeping, cooking, and sanitation, on the same parcel as is situated the primary residential structure. (Ord. 198 §1 (part), 1983).

15.44.020 Findings. The following findings specify the adverse impacts on the public health, safety and welfare that would result from allowing second units on single-family lots and which justify their preclusion within the City:

A. Lack of Sewers. The City has no sanitary sewer system and sewage effluent is disposed of into cesspools and leach lines which enter the earth strata and percolate into the soil. By authorizing second units in the City, the amount of sewage effluent entering the ground, currently

60,133,750 gallons a year, could double. This increase would add to an already existing problem of the effluent water entering the ground and decreasing the shearing strength of the predominant clay soil along slippage surfaces. The strength of clay decreases as its absorbed water content increases, resulting in movement and instability. The authorization of second units would lower the margin of safety by contributing to a decrease in geologic stability. The current method of sewerage the City is predicated on one-acre and two-acre sized lots and limited density, which places an acceptable level of risk on the amount of effluent entering the earth strata in the City.

B. Geologic Setting. In the City numerous active landslides greatly diminish development potential and call for caution in increasing densities. Reference is made to the Landslide Map following page 86 of the Seismic/Safety Element of the Rolling Hills General Plan. The risk of landslide is affected by development of the land, in that, as is noted in the Seismic/Safety Element, areas shown as probable landslides are "unacceptable risks" and development upon slide masses add to the total weight of the system, thereby increasing driving forces of the land. The addition of second units in the City would compound the problem by increasing development and exposure to levels of risks beyond acceptable standards as described on page 90 of the Rolling Hills Seismic/Safety Element.

C. Rural Design and Community Roadway Character. The City has no public streets and all roadways have controlled access. The roadways are rural and narrow (twenty to twenty-four feet of paving), with no curbs, gutters or sidewalks. In many instances equestrian paths are directly adjacent to the roadway paving. This design is predicated on a rural density of one to two acres per unit. The current capacity and design of the entirely private roadways, riding rings and trails cannot withstand increased densities. Roadways in the City are generally long and narrow with lengthy cul-de-sacs (one way in and out). This standard is acceptable only because of the low rural density, and the authorization of two units on lots would demand a change in the roadway design of the City. There is no funding available for such an endeavor and to proceed with two units on lots without additional access would compromise traffic safety as well as the fire protection needs of the City.

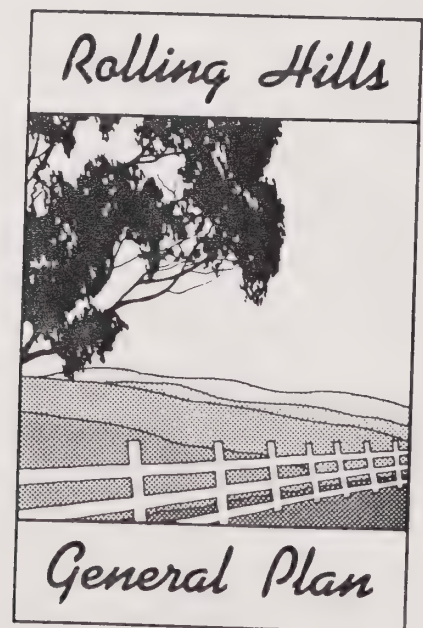
D. Fire Flow Requirements. The introduction of second units would change the infrastructure requirements on water pressure in the City beyond the current requirements of one thousand two hundred fifty g.p.m. According to the Seismic/Safety Element of the General Plan, water pressure to fight fires would change to one thousand seven hundred fifty g.p.m., and the spacing requirement for fire hydrants

would become three hundred thirty feet, rather than the current five hundred feet. The fire-fighting capability of the City would be compromised if proper pressure could not be met. The City has no funds available to revamp the system that was planned and installed for single-family residential lots in a hillside area. (Ord. 198 §1(part), 1983).

15.44.030 Limitation on housing opportunities. A. The City of Rolling Hills acknowledges that the preclusion of second units in Rolling Hills City may limit housing opportunities of the region. This limitation is justified, however, by the unusual circumstances described in Section 15.44.020.

B. Moreover, the City of Rolling Hills has participated in regional housing programs and has contributed its funds for housing projects to the city of Lomita, a neighboring municipality. In adopting the Housing Element of the General Plan in 1981, Rolling Hills accepted a share of the regional housing allocation model and established the documented constraints on housing potential in the City. The Housing Element established that Rolling Hills would work fully with all jurisdictions in insuring that housing needs of the region are met. Given the relatively small number of single-family residences located within the City, this preclusion will not significantly affect housing opportunities in the region. (Ord. 198 §1(part), 1983).

Circulation Element



June 25, 1990

CIRCULATION ELEMENT

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CIRCULATION ELEMENT

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CIRCULATION ELEMENT

INTRODUCTION

The circulation system is the infrastructure by which people and commodities move within and through the City. It is a network of routes which serve the circulation needs of the area. The goal of this element is to develop a plan for an overall circulation network that will meet current and future transportation needs of all those who live in or travel through the City of Rolling Hills.

Purpose of the Element

The Circulation Element is designed to:

- Identify and analyze circulation needs and issues;
- Present a planned circulation system to satisfy travel demand based upon projected land use;
- Establish standards and criteria for the location, design, operation and levels of service of various circulation facilities; and
- Set forth goals and policies to ensure the circulation needs of the community are adequately met.

Relationship to Other Elements

The Circulation Element is related to several other elements of the General Plan and perhaps most closely related to the Land Use Element. Circulation facilities are designed around the Land Use Plan's pattern of land use. The type and design of the circulation system are determined by the type and density of surrounding land uses as well as inter-city access patterns and loads.

The Circulation Element is also related to the Noise, Conservation and Safety Elements. As described in the Noise Element, the circulation system is one of the major components of urban noise. The circulation network has a direct impact on natural resources, particularly air quality. Factors of safety and seismic safety affect the location and design of circulation facilities, and dictate the need for evacuation and emergency routes.

EXISTING CIRCULATION SYSTEM

Local Street System

The City of Rolling Hills has a unique street system which consists entirely of private roadways, the easements which are owned by the Community Association. The "collector" streets are in general winding roads, with rolling to steep grades throughout their length and are lined with significant landscaping. Driveways from individual residences provide direct access to these collectors which are all two lane, undivided roadways.

The streets have been constructed with rolled curbs and intermittent roadway shoulders. The streets serve a mixture of vehicles, bicycles, horses and pedestrians. The following section identifies the traffic and design characteristics of the City's five major collector streets: Portuguese Bend Road, Crest Road, Eastfield Drive, Southfield Drive and Saddleback Road. Traffic data has been obtained from field studies, discussions with the City's traffic consultant, and from a traffic study conducted by Willdan Associates in 1987.(a) Figure C-1 illustrates the City's street system and summarizes the observed existing conditions.

Portuguese Bend Road

Field surveys were conducted of the portion of Portuguese Bend Road between Crest Road and the Main Gate. This two lane undivided road, which ranges in width from 24 to 26 feet, carries 2,500 vehicles per day (VPD) north of Upper Blackwater Canyon Road. At the Main Gate, a volume of 4,000 VPD was counted. These volumes are well below the approximate 12,000 VPD capacity of a two lane road and are described as "light traffic" for a residential neighborhood by the Institute of Transportation Engineers (ITE).(b)

(a) "Engineering and Traffic Survey for the City of Rolling Hills, Final Report"; Wildan Associates; October, 1987.

(b) Residential Street Design and Traffic Control; Institute of Transportation Engineers (ITE); 1989.

The Willdan traffic study(a) indicated accident rates (1.0 and 1.5 accidents per million vehicle miles) for Portuguese Bend Road north and south of Poppy Trail, respectively, which are comparable to the County average (1.4 accidents/MVM). A speed limit of 30 miles per hour is posted. As shown in Figure 1, STOP signs are provided on Portuguese at Saddleback, Lower Blackwater Canyon and Crest Road.

Crest Road

This two lane undivided roadway carries 2,300 VPD near the Crenshaw Gate and 2,600 VPD west of Southfield Drive. As described above, this range of volumes is described as light traffic for a residential neighborhood. The roadway width is between 20 and 22 feet with STOP signs on Crest at Portuguese Bend and Southfield-Caballeros. A 30 mile per hour speed limit is posted.

Crest Road from the Crenshaw Gate to Portuguese Bend has a rate of 2.3 accidents/MVM, while east of Portuguese Bend the rate drops to 0.3 accidents/MVM. The 2.3 accidents/MVM rate is higher than the County average of 1.4 accidents/MVM. However, the predominant accident type is "drunk driving" which would not necessarily be correctable by traffic mitigation measures.

Eastfield Drive

Eastfield Drive has daily volumes of 1,400 and 2,000 vehicles south of Chuckwagon Road and at the Eastfield Gate, respectively. These are acceptable volumes for a two lane residential roadway.

Accident rates of 1.9 and 2.8 accidents/MVM were calculated for the sections of Eastfield southwest and northeast of Hackamore Road, respectively. The predominant causes of accidents on Eastfield Drive are loss of control and bad brakes, reflective of the unique characteristics of this roadway, which is more winding, has steeper grades, and more limited sight distance than Portuguese Bend or Crest. While a speed limit of 25 miles per hour is posted, past speed surveys indicate a majority of vehicles exceed this limit. Advisory speeds are lower at some of Eastfield's horizontal roadway curves, but further signage of these speeds should be posted in both directions of travel. STOP signs are posted on the 20 to 22 foot wide Eastfield Drive at Crest, Open Brand, Hackamore, Chuckwagon, and Outrider.

(a) "Engineering and Traffic Survey..."; op.cit.

Southfield Drive

This two lane undivided roadway carries 500 vehicles daily south of Crest Road. The accident rate was determined to be 4.8 accidents/MVM, well above the 1.4 accidents/MVM County rate. It should be noted, however, that only one accident was recorded but due to the low volumes on this street, the resulting rate was high. The one accident was due to speeding. In the speed survey it was shown that many drivers exceed the 25 miles per hour speed limit. STOP signs are located at Packsaddle, Ringbit, and Crest.

Saddleback Road

Saddleback Road is a two lane undivided roadway with a daily traffic volume of 400 vehicles south of Hillside Lane. A high rate of 7.2 accidents/MVM was calculated with the predominate cause being loss of control. Although a 25 miles per hour speed limit is posted, a speed survey showed a majority of drivers travel over 30 miles per hour. At some of the horizontal curves on Saddleback, advisory speeds (which are lower than 30 miles per hour) are posted, although it is recommended signage of these speeds be posted in both directions of travel. This 20 to 21 foot wide street has STOP signs at its north and south ends at Portuguese Bend Road.

Circulation System

Public Transit

Direct transit service is not provided for the City of Rolling Hills since all of its roadways are private. Transit service is provided along the south perimeter of the City by RTD line 225 which runs along Palos Verdes Drive North. The RTD planning section was contacted and we were informed there are no current plans for expanded transit service in the immediate vicinity of Rolling Hills.

Equestrian/Hiking Trail System

Approximately 25 miles of equestrian/hiking trails are provided within the community of Rolling Hills. These trails are provided on private property easements and are primarily located in the canyon areas. Equestrians, walkers and joggers utilize the trail network; motorized vehicles and bicycles are prohibited. The trail system accesses the surrounding communities at the Eastfield and Main Gates. These trails can also be utilized by non-Rolling Hills

residents by obtaining a city-issued permit. This trail system will continue to be accommodated under the Circulation Plan.

Pedestrian Walkways

Pedestrians can use the Rolling Hills trail system, as described above. Consistent with the City's rural setting, sidewalks are not provided along the existing collector roads. For some sections, shoulders are provided adjacent to the collectors while in other areas, pedestrians are required to walk on the roadway edge due to landscaping in the shoulder area. If the landscaping is removed from these shoulder areas, then pedestrians can be separated from the traffic lanes.

Parking

Off-street parking is provided in conjunction with City residences. Parking can presently occur in the shoulder area along some portions of the collectors where landscaping is not prohibitive. In the future as these roadway easements are cleared, parking will be accommodated. Parking along the roadway shoulder may however reduce sight distances and could potentially conflict with pedestrian, bicycle, and equestrian movements.

SUMMARY OF CIRCULATION ISSUES AND OPPORTUNITIES

The City's existing street system has adequate capacity to accommodate existing daily traffic volumes. In general, the volumes on the collector roads are considered light for a residential street. The highest accident rates are found on Eastfield Road and Saddleback Road (the rate on Southfield Drive was, however, based on a single accident), which were in part due to the numerous horizontal curves, steep grades, and limited sight distances. While roadway operations appear to be adequate in Rolling Hills, the following recommendations would be appropriate:

1. Providing more clearly visible speed signs in both directions of approach.
2. Continue the City's existing policy of reviewing the siting of residential driveways.
3. Encourage the Rolling Hills Community Association to develop shoulder areas along the collector roadways.

OVERVIEW OF CIRCULATION PLAN

Future Traffic Demand

The future traffic demand in the City of Rolling Hills is directly related to the potential for additional residential units. As Rolling Hills is a gated community, potential increases in traffic in surrounding communities will not affect the Rolling Hills street system. The City's Land Use Element accommodates a net increase in 59 single-family dwelling units.

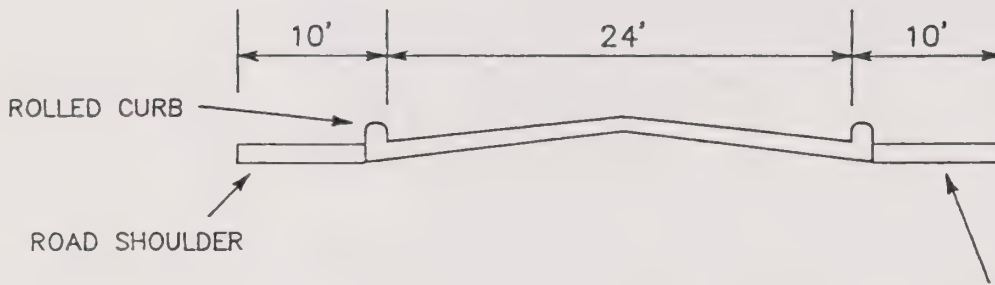
The Institute of Transportation Engineers (ITE), published Trip Generation, 4th Edition which contains trip generation rates for various uses including single-family homes. It was observed that an average of ten trip ends daily, are generated by each single-family dwelling unit. Therefore, the potential 59 dwelling units increase translates to a total of 590 daily trip ends to be distributed throughout the Rolling Hills street system.

Figure C-2 illustrates the projected increase in traffic daily volumes on the City's collector roadways. These volumes do not represent a significant impact to the City's street system. The projected future volumes are still expected to operate well within the roadway capacity.

Street Classification System

The unique characteristics of Rolling Hills' roadway system - the private status of its roadways, gated community operations, limited future traffic volume increases - eliminate the need for a specific street classification system. What have been referred to as collector roads actually operate similar to local or residential roads in most cities.

A typical cross-section has been developed for the Rolling Hills collectors to provide guidance in the development of a safe and efficient circulation system. Figure C-3 illustrates the recommended typical cross section. This cross section can be used as a guideline for future development.



ROAD SHOULDER: TO PROVIDE AN AREA UTILIZED BY PEDESTRIAN, EQUESTRIAN USES AND POSSIBLY PARKED VEHICLES. THIS AREA SHOULD BE FREE OF LANDSCAPING.

NOTE: ACTUAL ROADWAY EASEMENTS ARE WIDER THAN THE ABOVE CROSS SECTION. CREST RD. HAS A 100' EASEMENT, PORTUGUESE BEND RD. IS 60', WHILE SOUTHFIELD DR., EASTFIELD RD. AND SADDLEBACK RD. ALL HAVE 50' EASEMENTS.



SOURCE: Weston Pringle & Associates

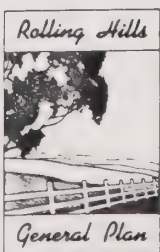


Figure C-3
Typical Road Cross Section

JUNE 25, 1990

Traffic Control Devices

The installation of traffic control devices in the City should be based upon established warrants and professional analyses. A reference for implementation is the California Department of Transportation, "Traffic Manual". The installation of traffic control devices in conformance with standards provides a safe road system and reduces potential liability on the part of the City.

These references provide guides or warrants for the installation of many traffic controls such as STOP signs, traffic signals and speed limits. In the case of speed limits, the guidelines are required to be followed by the California Vehicle Code. While these guides or warrants are not absolute, they will assist in providing uniformity, which is a safety benefit.

GOALS AND POLICIES

The following goals and policies were developed as part of the General Plan Update, and are designed to ensure the maintenance of an efficient circulation system for Rolling Hills.

GOAL 1: Maintain a safe and effective roadway system providing for the movement of people, goods and services to serve the existing and future needs of Rolling Hills.

Policy 1.1: Provide a street system and controls which conform with sound engineering practices.

Policy 1.2: Require new development to conform to the circulation standards and criteria of the City.

Policy 1.3: Continue to accommodate the various forms of transportation in Rolling Hills including vehicles, pedestrian, bicycles and equestrian.

Policy 1.4: In accord with the standard set forth in Figure C-3, require roadway easements to be clear of irrigation systems, landscaping and other obstructions.

GOAL 2: Provide a circulation system that contributes to residents' quality of life and minimizes impacts on the environment.

Policy 2.1: Encourage use of alternative modes of transportation to minimize environmental impacts.

Policy 2.2: Support street and traffic control systems to minimize traffic noise and air quality impacts.

Policy 2.3: Establish guidelines to deal with non-automobile usage of Crest Road (e.g. bikes, joggers, etc.).

Policy 2.4: Ensure that new roadways or improvements to existing roadways are sensitive to geologic instabilities.

GOAL 3: Maintain the rural character of Rolling Hills' road system.

Policy 3.1: Maintain the private status of the streets within the City boundaries.

Policy 3.2: Prohibit the development of highways in the City.

Policy 3.3: Require the construction of new roadways or improvements to existing roadways to maintain compatibility with existing topography and minimize grading or cut and fill.

Open Space and Conservation Element



June 25, 1990

OPEN SPACE AND CONSERVATION ELEMENT

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OPEN SPACE AND CONSERVATION ELEMENT

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OPEN SPACE AND CONSERVATION ELEMENT

INTRODUCTION

Rolling Hills has undergone a transition since the early part of the century from a sparsely vegetated agricultural area to a heavily landscaped residential community. Such a conversion of land use often endangers sensitive resources and open space lands. Thus, Rolling Hills and the other Palos Verdes Peninsula communities have made a concerted effort to conserve and protect the natural environment during their development. This Open Space/Conservation Element is a written description of the City's commitment to maintaining a balance of preservation and development. Its purpose is to ensure future generations the same level of enjoyment from the environment as is enjoyed by present residents.

Purpose of the Element

The Open Space/Conservation Element is designed to:

- Inventory the existing natural resources and the various functions served by open space.
- Balance planning activity with environmental considerations.
- Establish recognition of the social, economic and aesthetic benefits which develop from the preservation of open space.
- Prevent neglect or unnecessary destruction of natural resources.
- Set forth goals and policies concerning the conservation, development and use of natural resources and the preservation of open space.

Relationship to Other Elements

The Open Space/Conservation Element provides significant input into the Land Use and Circulation Elements. Land use decisions are based upon location and significance of various environmental

factors. Also, new circulation proposals will be required to consider possible environmental impacts prior to their approval.

The information provided in the Open Space/Conservation Element is significant on a project-specific basis. Through the environmental assessment process, planners and local decision-makers are required to make an initial assessment as to whether or not a proposed project will have a "significant effect" on the environment. The Open Space/ Conservation Element will serve as a tool in the environmental evaluation process.

INVENTORY OF EXISTING CONDITIONS

The purpose of this section is to provide information relative to the utilization of the City's natural resources and the preservation of open space areas. The information presented herein provides the basis for the policies and strategies discussed in the element's final section.

Open Space Inventory

The planning area consists of the ridgetops and canyons of the San Pedro Hills. The area is primarily wooded due to abundant landscaping which has been placed as development occurs. The large size of the City's parcels and the slopes upon which many of them exist allow for the preservation of large amounts of privately-owned open space. The City actively promotes the preservation of open space by requiring easements for riding and hiking trails for all lots created within the City and substantial building setbacks on private property. The use of these areas as wildlife habitats and growth areas for natural vegetation is emphasized. Restrictions on the size and locations of buildings also promote preservation of natural vistas and canyons.

The City's open space resources have been grouped into the following four categories, and are graphically depicted in Figure OSC-1.

Tennis Courts: Three tennis courts are located opposite the City administration building. These courts are owned by the City and operated by the Rolling Hills Community Association and are open to residents and their guests from 7 a.m. to 10 p.m.

Publicly Owned Open Space: The northern portion of Storm Hill is owned by the City of Rolling Hills. The property consists of approximately eight acres. The property is open to City residents for use as an open equestrian area. The property was dedicated to the City through the provisions of the Quimby Act. The City also owns two riding rings which are described below under equestrian facilities.



Equestrian: Two riding rings are located within the City of Rolling Hills. Hesse's Gap Ring is located on the City's eastern side and Clif Hix Ring is located on the City's western side adjacent to



Tennis Courts
Publicly Owned
Open Space



Equestrian Riding Ring
Canyon Open Space

  North  scale in feet

SOURCE: CBA

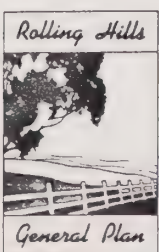


Figure OSC-1
Open Space Resources

JUNE 25, 1990

Storm Hill. Laced throughout the community are approximately 25 miles of private equestrian trails maintained by the Rolling Hills Community Association. The trails are developed on property easements and are primarily located in the canyon areas. The trail system initiates at the Eastfield and main guard gates, and may be utilized by non-city residents by obtaining a City-issued permit. Joggers and walkers also enjoy the trail system.

Hillside Open Space: A substantial amount of land in Rolling Hills is constrained from development due primarily to excessively steep hillsides and canyons. The canyon areas found within Rolling Hills are presented generally in Figure OSC-1. These areas were identified through a combination of aerial photographs and the United States Geological Surveys topographic maps. Areas identified as canyons are generally areas which remain unbuilt behind and between two residential lots and which are approximately 100 feet or more below these adjacent properties. In some cases these areas do not specifically meet the above criteria; however, their position relative to adjacent properties, varied terrain, or position in relation to potential watercourses made it practical to include them. Most of these areas will not be built upon. The potential does exist, in some cases, for development to occur when careful review is exercised.

Management of Resources

In addition to open space areas, Rolling Hills contains natural resource components which warrant conservation. Local resources include biological habitat, surface and ground water, air quality, soils, and minerals. The characteristics of these resource components will be described in the following section, providing the foundation for policies which support their conservation.

Biological Habitat

Rolling Hills is a hilltop community located on the San Pedro Hills of the Palos Verdes Peninsula. The community supports a wide variety of plant and wildlife. Much of the plant life found in Rolling Hills is imported as the natural state of the area included only coastal grasses and shrubs. Since development of the community was initiated, Rolling Hills has become home to many trees and flowers. The developers planted trees and shrubs along the roadsides and to each homeowner of five or more acres, five Olive Trees were donated. Among the more common plants that

were established in the community's early stages of development were Pepper Trees, Geraniums and Matilija Poppy. Nearly three-quarters of households responding to the Community Attitude Survey indicated concern over the disturbance of native vegetation through development in Rolling Hills.

Wildlife in Rolling Hills is varied. Many animals habitate in the area due to the relative abundance of space and vegetation. Types of wildlife which may be expected in the Rolling Hills area include squirrels, gophers, skunks, mice, raccoon, opossum, foxes, lizards, snakes, frogs and a wide variety of birds including owls and peacocks. Pheasant and quail are currently being reintroduced into the area. Of the many animals inhabiting the Rolling Hills area, several are listed by California's Department of Fish and Game Natural Diversity Data Base (NDDDB). The NDDDB tracks animals, plants and natural communities that are endangered, candidates for protection or considered sensitive. The occurrence of these is tracked on United States Geologic Survey Maps. Circles of varying sizes show occurrences of individual species or communities. The size of the circle correlates to the size of the area in which the subject is known to habitate. As these maps are too large to include in the General Plan, they are kept on file at City Hall. No plants are currently listed by the NDDDB for the Rolling Hills area. The only animal listed as endangered by the Federal Government is the Palos Verdes Blue, a butterfly which was last seen in the Rolling Hills area in May, 1986. Several other animals do occur, however, that are considered as candidates for protection by either the Federal Government or the State Government. The Tiger Beetle, while not considered to be endangered or threatened, does maintain a sensitivity to humans. Sensitivity of an animal indicates that a condition of the animal or its habitat such as rarity, fragility or sensitivity to humans, exists to an extent that may be cause for concern.

Table OSC-1 shows animals that are either listed or considered for listing in the Rolling Hills area.

**TABLE OSC-1
ENDANGERED OR SENSITIVE ANIMAL SPECIES**

Name	Priority	Fed Status	Cal Status	Sensitive
Palos Verdes Blue	A2.2	Endangered	Cal Cand	
Lyons Pentaecheta	A2.1	Fed Cand 2		
CA Brackishwater	A2.2	Fed Cand 2		
Snail				
Pacific Pocket Mouse	B1.2	Fed Cand 2		
CA Black Tailed	B2.2	Fed Cand 2	Cal Cand	Sensitive
Gnatcatcher				
San Diego Horned	B2.2	Fed Cand 2		
Lizard				
Bank Swallow	B3.1			
Long Eared Owl	B3.1			
Tiger Beetle	BU			
<p>The priority rating of the above indicate the following conditions:</p> <p>A2.1 - Very rare, endangered and unprotected species</p> <p>A2.2 - Very rare and threatened species</p> <p>B1.2 - Rare and threatened species <u>or</u> very rare, endangered or threatened subspecies.</p> <p>B2.2 - Rare and not threatened, or peripheral and endangered in California only, species <u>or</u> rare and threatened subspecies</p> <p>B3.1 - Uncommon and declining, or peripheral and threatened in California only, species <u>or</u> uncommon and threatened, or peripheral and endangered in California only, subspecies.</p> <p>BU - Possibly threatened - needs more information.</p>				

Source: California Department of Fish and Game,
Natural Diversity Data Base

Water Resources

Water sources available to the City are derived exclusively from Metropolitan Water District through West Basin Municipal Water District and California Water Service Company.

Groundwater sources are virtually nonexistent due to the City's and peninsula's position atop a tertiary deposit of mudstones, and diatomaceous shales from the metamorphic period. The City and peninsula are also effectively severed from other groundwater supply by the Palos Verdes fault.

Through the first six months of 1989, the City of Rolling Hills consumed seven million cubic feet of water. Water consumption for the third and fourth quarters of each year are somewhat higher than first and second quarter consumption rates due to warmer weather.

Due to the lack of available groundwater, Rolling Hills' water supply comes entirely from non-interruptable sources as allotted by West Basin Municipal Water District and Metropolitan Water District.

Relatively stable population figures indicate that no substantial change in water consumption will occur. However, consumers are currently being requested to reduce water consumption by ten percent and similar requests can be expected on a periodic basis in the future.

Air Quality

Air quality, like other natural resources, is limited. Within any time period, the local air basin has a restricted ability to dilute contaminants and maintain air quality at levels which do not adversely affect the population. Air quality is a major concern of residents and visitors to the Los Angeles Metropolitan area, and with increasing population and development, air quality can be expected to further deteriorate until extreme efforts are made to control emissions of known pollutants into the atmosphere.

Air quality standards are set by both the State and Federal governments. The South Coast Air Quality Management District has the responsibility to monitor and enforce air quality standards in the South Coast Air Basin, of which Rolling Hills is a part.

Air quality data specific to Rolling Hills is not available due to the lack of a monitoring station in the immediate area. However, Rolling Hills is located in Source Receptor Area 3 which includes the monitoring station in Hawthorne, thereby providing a suitable data base for estimating air quality in the City. Tables COS-2 and COS-3 describe the number of days Federal and State standards were exceeded at this monitoring station. As evidenced by these tables, air quality standards for ozone, particulates, carbon monoxide and visibility are being exceeded in Rolling Hills. The proximity of several oil refineries along with the Los Angeles International Airport to the reporting station should indicate that the air quality in Rolling Hills is actually better than reported for Hawthorne.

Air quality, as reported at the Lennox-Hawthorne reporting station, appears to have remained relatively stable over the three and one-half year period. While ozone violations ranged from 10 to 19 and carbon monoxide violations ranged from one to 12, there does not appear to be a consistent identifiable trend of either worsening or improving air quality.

The State Air Resources Board has designated the South Coast Air Basin a non-attainment area for ozone, carbon monoxide, particulates and nitrogen dioxide. Only lead and sulfur dioxide are in compliance with Federal and State standards. In February, 1979, the Southern California Association of Governments adopted the Air Quality Management Plan, which sets forth policies and programs for localities to undertake air quality improvement strategies.

While Rolling Hills does not contain any polluting industries, automobile emissions are probably higher per vehicle due to longer trip lengths. The City's resident-generated vehicle trips do contribute to air pollution. The Rolling Hills General Plan specifies policies to initiate efforts to improve local air quality, such as trip reduction techniques, and to coordinate with the South Coast Air Basin in implementing strategies set forth in the Air Quality Management Plan to improve regional air quality.

TABLE OSC-2
VIOLATIONS OF FEDERAL AIR QUALITY STANDARDS
LENNOX-HAWTHORNE MONITORING STATION

Pollutant	1985	1986	1987	1988 (Jan-June)
Ozone	4	8	3	(3)
Carbon Monox 8 hr.	46	18	18	(15)

Source: California Air Quality Data, Volumes XVII (1985), XVIII (1986), XIX (1987) and XX (1988).

FEDERAL AIR QUALITY STANDARDS

Ozone	1 hr. - 0.12 ppm
Carbon Monoxide	1 hr. - 35 ppm 8 hr. - 9 ppm
Sulfates	-
Visibility	-

TABLE OSC-3
VIOLATIONS OF STATE AIR QUALITY STANDARDS
LENNOX-HAWTHORNE MONITORING STATION

Pollutant	1985	1986	1987	1988 (Jan-June)
Ozone	11	19	10	(5)
Carbon Monox 1 hr.	12	1	2	(5)
8 hr.	51	23	22	(17)
Sulfates	0	1	0	(0)
Visibility	174	154	129	(72)

Source: California Air Quality Data, Volumes XVII (1985), XVIII (1986), XIX (1987) and XX (1988).

STATE AIR QUALITY STANDARDS

Ozone	1 hr. - 0.10 ppm
Carbon Monoxide	1 hr. - 20 ppm
	8 hr. - 9 ppm
Sulfates	24 hr.- 25/ug/m3
Visibility	10 mi. at 70% hu.

Soils

Soils in Rolling Hills consist primarily of those which exist on gently sloping or rolling foothills and terraces throughout the Los Angeles Basin. Soil types consist predominantly of fertile clays with some loams and shales. The Soil Conservation Service has identified the following soil types in Rolling Hills.

Altamont-Diablo Association -	30-50% slopes
Ramona-Placentia Association -	5-9% slopes
Diablo-Altamont Association -	2-9% slopes

Source: USDA Soil Conservation Service,
Report and General Soil Map, Los Angeles, CA, 1969.

In addition to soil maps, the Soil Conservation Service Report contains descriptions of soil types which define a soil's limitations and its suitability for a specific use. The soils found in Rolling Hills are not prime agricultural soils. The majority of soil found in Rolling Hills will, however, support a variety of agricultural crops. The following section describes the characteristics of those soils which occur in Rolling Hills.

Altamont-Diablo association, 30 to 50 percent slopes, eroded: Soils in the Rolling Hills planning area are composed almost entirely of those found in the Altamont-Diablo association. Natural vegetation consists of annual grasses and forbs. Altamont soils of this association are moderately eroded dark brown, neutral clays with a brown calcareous clay subsoil and partially scattered calcareous soft shale or sandstone substratum. These soils are well drained with slow subsoil permeation, rapid runoff and high erosion hazard. Their inherent fertility is high. Diablo soils of this association are moderately eroded dark gray, neutral clay with dark grayish brown, strongly calcareous subsoil and very strongly calcareous shale with outcrops of hard shale in the substratum. These soils are well drained with slow subsoil permeation, rapid runoff and high erosion hazard. Inherent fertility is high.

These soils are used extensively for residential development, for watershed and wildlife.

Ramona-Placentia association, 5 to 9 percent slopes: Natural vegetation consists mainly of annual grasses and forbs. Ramona soils are brown to reddish brown heavy loam, loam, or sandy loam soil. The subsoil is dense clay loam or clay which can contain coarse fragments. The substratum or parent material is loam or light clay loam. Ramona soils of this association are well drained with slow subsoil permeation and medium runoff. The erosion hazard is moderate and the inherent fertility is moderate.

Placentia soil is brown to reddish brown loam or sandy loam. The subsoil is dark reddish brown dense clay loam which restricts roots and the substratum may contain gravelly or iron cemented hardpan. The Placentia soils of this association are moderately well drained with very slow subsoil permeation and medium runoff. The erosion hazard is moderate and inherent fertility is low. These soils are used almost exclusively for residential and industrial development.

Diablo-Altamont association, 2 to 9 percent slope: Natural vegetation consists of annual grasses and forbs. Diablo soils are well drained and have slow subsoil permeability. They have dark gray, neutral, clay surface layers with very strongly calcareous shale occurring below. Outcrops of hard shale make the surface rocky in a few places. Inherent fertility of this soil is high.

Altamont soils are well drained and have slow subsoil permeability. They have dark brown, neutral, clay surface layers underlain by a brown calcareous clay subsoil. Partially weathered calcareous soft shale or sandstone occurs as a substratum. Inherent fertility of this soil is high. These soils are used almost exclusively for residential development.

Mineral Resources

The California Division of Mines and Geology has identified mines and mineral resources within Los Angeles County. A copy of this map is located in the Los Angeles County Master Environmental Assessment. No mineral resources or mines are indicated for the Rolling Hills area.

In addition to the lack of significant mineral resources, the Basic Deed Restrictions covering all properties in Rolling Hills prohibit any mining operations and the production or extraction of any minerals or mineral substances from any property. The City's zoning ordinance further prohibits any such commercial activities.

SUMMARY OF OPEN SPACE/CONSERVATION ISSUES

In order to identify appropriate policies for the conservation of resources in Rolling Hills, the following issues have been identified as part of the General Plan Update through input from the General Plan Advisory Committee and Community Attitude Survey.

- Development siting often does not respect the aesthetic value of open space areas, and can disturb public viewsheds.
- Many newer residences are being constructed to maximize building area on the lot, resulting in extensive grading of Rolling Hills' steeper parcels.
- Many residences are landscaped with non-native vegetation, resulting in increased habitat loss for native species and usually in increased water consumption.
- The rural character of the City's extensive network of hiking/equestrian trails is being compromised through use of the trail system by bicyclists and motorized vehicles.

GOALS AND POLICIES

GOAL 1: Conserve and enhance the City's natural resources, facilitating development in a manner which reflects the characteristics, sensitivities and constraints of these resources.

Policy 1.1: Encourage the retention of natural habitat for wildlife through the preservation of existing vegetation.

Policy 1.2: Encourage the reintroduction of native wildlife onto the Peninsula.

Policy 1.3: Encourage the introduction of drought-resistant landscaping in lieu of plant materials which require extensive irrigation.

Policy 1.4: Maintain stringent grading regulations which promote soil stability and prevent erosion.

Policy 1.5: Require construction and landscaping to preserve the natural scenic vistas available to properties.

Policy 1.6: Permit the use of solar panels to maximize energy efficiency, and require the panels to be screened from public view.

Policy 1.7: Encourage the preservation of watershed areas in their natural state.

Policy 1.8: Promote public understanding of the fragile nature of the City's hillsides.

Policy 1.9: Encourage use of alternative modes of transportation and support street and traffic control systems to minimize air quality impacts.

Policy 1.10: Cooperate with the Air Quality Management District and incorporate provisions of the Air Quality Management Plan into project review procedures.

GOAL 2: Enhance opportunities for outdoor recreation activities within the City.

Policy 2.1: Encourage the maintenance and improvement of the system of hiking and equestrian trails in Rolling Hills through the Community Association.

Policy 2.2: Continue the City's program of acquisition and development of strategically located recreation centers.

Policy 2.3: Encourage the continued upkeep of all City-owned recreation facilities within Rolling Hills.

Policy 2.4: Provide expanded recreational opportunities for children.

Policy 2.5: Establish guidelines to limit usage of hiking/equestrian trails to those on foot or horseback.

Safety Element



June 25, 1990

SAFETY ELEMENT
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SAFETY ELEMENT

INTRODUCTION

Through the requirement of the Safety Element, State government has placed responsibility on the local entity for the evaluation of natural and man-induced hazards, and the formulation of programs to reduce risks associated with such hazards. By using the Safety Element as a tool, localities are to protect their citizens' health, safety and welfare.

Certain natural disasters, such as earthquakes and flooding, cannot be entirely handled on the local level, and must be considered within a regional context. In light of this, the City must join its efforts with other localities in the region.

Purpose of the Element

This element's specific focus is the reduction and/or prevention of injuries, loss of life, property damage, and economic and social disruption due to fires, floods, seismic activities, and other natural disasters. The Safety Element serves the following three key functions:

- Provide a framework by which safety considerations are introduced into the planning and development process;
- Identify and evaluate natural hazards; and
- Establish goals and policies which minimize potential adverse effects related to natural hazards.

Relationship to Other Elements

The Safety Element is related to all elements of the General Plan. The Conservation/Open Space Element provides for the protection of the area's natural resources, whereas the Safety Element tries to minimize the damage caused by these resources in the event of a natural disaster. Because of the need for safe and efficient use of streets, and traffic routes for emergency evacuation, a relationship exists between the Circulation and Safety Elements. The Noise

Element sets forth policies to ensure safe noise levels are maintained in the City. The Housing and Land Use Elements ensure that structures are of standard design and building materials, and are not subject to undue hazard based on their siting.

Seismic Hazards

Ground Shaking Hazard

The two principal seismic considerations of concern to the City of Rolling Hills are surface fault rupture and earthquake ground shaking. The major seismic sources that could produce significant ground shaking in the City include the Palos Verdes, Newport-Inglewood, Whittier, Santa Monica/ Malibu Coast, and the newly proposed Torrance-Wilmington fault system. (Refer to Figure S-1). For planning purposes, the Palos Verdes and Newport-Inglewood faults pose the greatest threat to the City of Rolling Hills. Seismic parameters of the Torrance-Wilmington fault system underlying the Palos Verdes Peninsula are not well defined and require further study to determine seismic risk.

The intensity of ground shaking at a given location depends primarily upon the earthquake magnitude and distance from the source (epicenter) and the site response characteristics. Additional seismic characteristics that control ground response in the City include: (a) higher frequency seismic waves are more efficiently transmitted through bedrock materials; (b) topography may focus high frequency seismic energy, and (c) high frequency ground motion affects residential structures more readily than medium rise buildings. Higher frequency seismic ground motion will, therefore, tend to dominate a local earthquake along either the Palos Verdes or Newport-Inglewood fault, due to the influence of bedrock and the high frequency content of near-field earthquakes.

The Palos Verdes fault is potentially capable of producing the most intense ground acceleration in the City, due to its proximity (1+ mile). A worst-case earthquake on the Palos Verdes fault would produce seismic shaking with peak horizontal ground acceleration estimated at .53g. The Newport-Inglewood fault, located approximately 9+ miles from the City of Rolling Hills, is capable of producing a ground acceleration of .28g. These worst-case earthquakes (referred to as maximum credible earthquakes) may have shaking durations of up to 25 seconds. Several seismic parameters derived from selected potential causative faults are summarized for their respective maximum credible earthquake in the Table of Seismic Parameters. (Refer to Table S-1.)



cba ↑ North 0 20 scale in miles

SOURCE: California Division of Mines and Geology, 'Fault Map of California', 1982

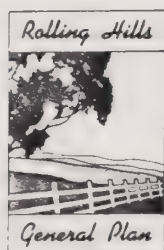


Figure S-1
Regional Fault Map

JUNE 25, 1990

POTENTIAL CAUSATIVE FAULT/FAULT ZONE	CLOSEST DISTANCE FROM FAULT TO SITE	LENGTH OF FAULT/ FAULT ZONE	5 MAXIMUM CREDIBLE EVENT				10 GROUND MOTION PARAMETERS		
			1 MAXIMUM MAGNITUDE OF HISTORIC EARTHQUAKES	APPROX. DATE OF MOST RECENT SURFACE RUPTURE	1,5 MAXIMUM CREDIBLE EARTHQUAKE MAGNITUDE 1	RECURRENT INTERVAL OF MAJOR EARTHQUAKE (Yrs.)	11 PEAK HORIZ. GROUND ACCEL. (g).	12 PREDOMINANT PERIOD (IN BEDROCK) (Sec.)	13 DURATION OF STRONG SHAKING (Sec.)
Whittier	39 Km. 24 Mi.	74 Km. 46 Mi.	6.0 (1910) 5.5 (1938) ³	Historic Post-1660 ³	7.3	Approx. 730 ^{8,9}	0.15	0.34	32
Santa Monica San Fernando	32 Km. 20 Mi.	24 Km. 15 Mi.	None Known	None	6.7	Approx. 3,960 ^{1,7}	0.13	0.29	21
Malibu Coast	33 Km. 21 Mi.	34 Km. 8 Mi.	None Known	Holocene	6.9	?	0.14	0.30	24
Newport- Inglewood	15 Km. 9 Mi.	73 Km. 46 Mi.	6.2 (1933)	Historic ⁴ 1933	6.9	Approx. 1,500 ^{8,9}	0.28	0.30	24
² Palos Verdes	2 Km.	45 Km.	None Known	Holocene (?)	7.0	2,000-8,000	0.53	0.31	25

1. After Ziony and Yerkes 1985. Earthquake magnitudes reported as moment (M) magnitudes except where otherwise noted.

2. Dames and Moore and MESA-2 1983.

3. After Rockwell et al., 1986.

4. After Guptill and Heath 1981.

5. Estimate of the largest earthquake that can reasonably be expected to occur on a given fault.

6. Estimate for a given point along a fault.

7. Recurrence interval based upon documented evidence of faulting in sediments of known age.

8. Recurrence interval based upon estimated fault slip rate.

9. After Wesnousky 1986.

10. Parameters calculated for site response to Maximum Credible Earthquake.

11. After Campbell, 1988.

12. After Seed et al., 1969

13. After Dobry et al., 1978 (Soil)

14. Crook et al., 1987.



SOURCE: Leighton and Associates

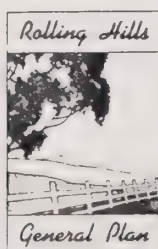


Table S-1 Seismic Parameters

JUNE 25, 1990

Fault Rupture Hazard

The designation of a fault as "active" or "inactive" is largely dependent on the classification criteria used and the purpose of the designation. As a measure of the potential for ground rupture, "active" faults are defined by the State Alquist-Priolo Act and delineated through designated special study zones along the trace of the fault. This designation states that a fault is active if surface displacement can be proved within about the last 11,000 years, as interpreted through geological investigations.

In the last section, the Palos Verdes and Newport-Inglewood faults were considered "seismically active" based on their potential for producing an earthquake large enough to impact the City, not on the basis of their surface rupture potential, which the State has only recognized for Newport-Inglewood fault. Other faults may be considered "potentially active" by the State Mining Board. These faults may, or may not, have experienced surface rupture during the last 2 million years (Pleistocene) but are, nonetheless, considered potential seismic sources for grading and structural design purposes. The following is a discussion of evidence of more significant faults that may impact the City as a fault rupture hazard or as a potential seismic source.

Cabrillo Fault: The Cabrillo fault, and accompanying subsidiary faults, are the only major faults transecting the City of Rolling Hills, thus posing the only direct threat of fault rupture. It is not a "major" fault, meaning that it is not on the same order of regional importance as the Palos Verdes or Newport-Inglewood faults. However, displacement of deposits younger than 10,000 years on offshore portions of the fault has been documented, suggesting that the Cabrillo poses a potential fault rupture hazard, as defined by the State. The Cabrillo Fault is not currently recognized as active under the Alquist-Priolo Act, but is considered "active" in the recent revision of the County of Los Angeles Safety Element [draft].

The onshore portion of the fault presents special problems. The Alquist-Priolo Act allows individual jurisdictions to create special studies zones around faults not yet recognized by the State as active. The usual approach to special studies requires that the fault be accurately located, dated to determine potential for surface rupture, and have adequate residential setback distances away from the fault trace. The onshore portion of the Cabrillo fault within the City of Rolling Hills, however, is obscured by the prolific landsliding in the area. Recent attempts at confirming the age and

even the location of the fault by Dr. Roy Schlemmon (1984) have been complicated by the landslides and thick slope soils. It is doubtful that stratigraphic evidence still exists that may confirm the activity or precise location of the onshore portion of the fault.

Several workers have speculated that some of the recognized fault traces onshore might even be attributed to ancient landsliding (Ehlig, 1989 personal communication; Schlemmon, 1989 personal communication). As discussed in a later section on earthquake-induced slope instability, if this assumption is correct, it is possible that what many have interpreted as traces of the Cabrillo fault onshore may be discrete instances of landslide reactivation by earthquakes during extremely wet climatic periods. If so, appropriate setbacks or hazard reduction measures around the trace of the postulated fault may be still be warranted and possible.

Palos Verdes Fault Zone: The Palos Verdes fault is approximately 1 mile from Rolling Hills. Woodward Clyde Consultants (1983) point to several factors that suggest Holocene (less than 10,000 years) displacements have occurred along the onshore portion of the marine Palos Verdes fault. These factors include the extensive deformation of the 120,000 year old terrace on the Peninsula, and the apparent Holocene folding of the Gaffey [street] anticline, a feature related to probable drag movement on the Palos Verdes fault. The fault is designated as active in the revised Los Angeles County Safety Element, however, it is not considered to be a fault rupture hazard to the City of Rolling Hills. Instead, consideration should be given to the potential impact that fault rupture adjacent to the City may have on emergency and short-term earthquake recovery functions. A maximum credible earthquake of M7.0 (Richter Magnitude) has been assigned to this fault.

Newport-Inglewood Fault: Located approximately nine miles southwest of Rolling Hills, the Newport-Inglewood structural zone is a major fault structure in the Los Angeles Basin. Although no historical surface faulting has been associated with earthquakes along the Newport-Inglewood structural zone, various fault segments have a history of moderate to high seismic activity. The largest instrumentally-recorded event was the 1933 Long Beach earthquake, which occurred on the offshore portion of the Newport-Inglewood structural zone and registered a Richter Magnitude of 6.3. The fault system is recognized as active by the State Alquist-Priolo Act and considered a highly probable source of strong ground motion for the City.

Torrance-Wilmington Fault: The existence of this fault has been recently interpreted from seismicity and oil well log data. The Dume-Torrance-Wilmington Fold and Thrust Belt is an active area of compression and uplift that has come to be appreciated as a potentially significant seismic source as a consequence of analyses of the 1987 Whittier Narrows Earthquake. Since the main flat-lying fault lies at a depth of 15 kilometers and there is no surface expression of the fault, they have been referred to as blind thrust faults. Surface verging splays of these flat-lying faults may approach to within kilometers of the surface; however, their surface rupture potential is probably regionally distributed through general uplift of the hills that are formed as a result of the fault. The fault does pose a significant increase in the annual probability for strong ground motion to effect the City of Rolling Hills, however, the magnitude of this increase has not been quantified at this time.

Liquefaction and Ground Failure Hazard

Secondary earthquake hazards, such as liquefaction, lateral spreading, and seismically-induced dynamic settlement are generally associated with relatively high intensities of shaking, shallow ground water conditions, and the presence of loose, sandy soils or alluvial deposits. Although Rolling Hills is subject to moderate to high seismic shaking, the general lack of thick, loose, sandy soils and saturated alluvial deposits makes the potential for liquefaction low to very low.

Earthquake-Induced Subsidence

While subsidence commonly occurs from ground water or petroleum withdrawal, it can also occur in response to large local earthquakes which could result in the inundation of low-lying areas surrounding the City of Rolling Hills. Subsidence from either of these sources should have no direct effect on the City of Rolling Hills beyond the effect of the earthquake shaking. Although subsidence is not considered a geologic hazard, emergency response plans should recognize the potential for impaired transportation in the Long Beach area from inundation.

Earthquake-Induced Slope Instability and Landslide Reactivation

The City of Rolling Hills, because of the nearby seismic sources and presence of large landslides and steep road cuts in some locations, is vulnerable to earthquake-induced slope instability. The potential types of slope instability range from shallow soil slips and rock falls to bedrock slides. The most susceptible slopes for rock

falls would be steep embankments where the bedding is dipping out of slope. Almost all steep slopes would be susceptible to soil slips. Although the majority of surficial slides activated by a nearby large earthquake would be relatively small, their occurrence would be widespread and may block essential roads used for egress and regress. Such hazardous slopes can be identified and mitigated relatively simply.

The City of Rolling Hills has the potential for complex, shallow and deep-seated earthquake-induced hillslope failures particularly if combined with high rain fall. Rain-saturated slopes, could affect the run-out distance and velocity of soil slides. In the worst possible case, a potential soil slip could be completely saturated, resulting in the mobilization of the soil slide downslope as a high velocity debris flow. At the present time there is not enough data to determine the extent or risk of this type of down slope movement, but it is likely that some residences might be exposed to impact by such water-saturated failures.

If saturated conditions exist in the hillslope during strong ground motion, deep-seated landslides may be reactivated. This is especially relevant in the City of Rolling Hills where abundant, marginally stable landslides underlie several large areas of the City. There is some evidence to suggest that several such slides, specifically those adjacent to the Cabrillo fault, may have experienced earthquake-induced reactivation within the last 10,000 years. (Roy Schlemon, 1988; personal communication).

Residential Structural Vulnerability to Strong Ground Shaking

A trend in the new housing and modifications to existing housing in recent years has been the split level and irregular floor plan. Such designs naturally result in an asymmetrical configuration, and a probable deficiency in seismic design. This trend can be further compounded on hillslopes where pole platforms or pole structures are used to support the house structure, in lieu of conventional hillslope grading practices which place the entire foundation into bedrock or stable fill. Such foundation construction can result in "soft story" structural failures. Because some split level designs serve to mitigate landslide damage, this design may actually be encouraged in some instances. Each proposed split level should be carefully reviewed on a case by case basis.

In the event of a near-field earthquake, such as could occur on the Newport-Inglewood, Palos Verdes, or Torrance-Wilmington faults, residential structures are most vulnerable to structural damage.

The recent "Planning Scenario for a Major Earthquake on the Newport-Inglewood Fault" by the California Division of Mines and Geology predicts seismic intensities on the order of MM = VIII on bedrock areas on the Palos Verdes Peninsula. Such intensities are known to cause torsional racking of the foundation and wall elements of irregularly shaped structures, resulting in concentration of damages between wings of houses. Emphasis on symmetrical and/or simple floor plan residential design provides a viable option for reducing future earthquake losses in the City.

Nonstructural damage is perhaps the largest expected source of injury and monetary losses (i.e., the damage caused by toppling of furniture and components inside the house). In cases where continued function is paramount, such as an emergency operation center in the City, special strategies to secure needed communication, generators, or emergency equipment is warranted.

Emergency Earthquake Scenarios

The high frequency content produced from nearby large earthquakes will affect above ground electrical utilities, particularly electrical substations linked to the community. Dysfunction of electrical facilities is expected to last no longer than 3 days. Gas and water utilities suggest that 72 hours is an adequate estimate of maximum recovery times for service.

Dysfunction of computers, either through direct damage or electrical power failure, may affect the ability to use telephones. Telephone saturation, meaning the overuse of telephone lines in an emergency for nonemergency purposes, may also lead to loss in function of the telephone system. Residents and City emergency operators should be reliant on radio communication and consider using available phone service for emergencies only.

In a worst-case scenario any acute care hospitals having a patient capacity of 99-beds or less within 10 miles of the City of Rolling Hills will suffer at least a 50% loss in available bed space. Provisions for such a possibility should include the capability for transporting critically injured residents to hospitals and local capability to support the moderately injured. The City has emergency provisions for coordination with the Red Cross.

Transportation may be impeded in areas surrounding the City in the event of a magnitude 7 earthquake on the Newport-Inglewood or Palos Verdes fault. Specifically, liquefaction may disable bridge approaches such as the Vincent Thomas, Gerald Desmond, and

Schuyler Heim. Route 710 may also be closed between Route 91 and Long Beach, also from liquefaction damages.

The 1987 Whittier earthquake exposed the vulnerability of industries using or storing hazardous materials to accidental atmospheric releases. Atmospheric releases of hazardous materials pose the greatest hazard to the City of Rolling Hills because of the unpredictability of the toxic plume, which in many cases may be invisible. Although the plume may dissipate before reaching the jurisdiction of the City, there exist no sufficient studies to characterize the risk of the City to such an accident. Emergency response plans should consider the potential occurrence of such an accident.

Issues and Opportunities - Seismic Hazards

- 1) The Newport-Inglewood and Palos Verdes Faults present the greatest understood ground shaking threat to the City of Rolling Hills, but the newly recognized Torrance-Wilmington and related faults pose a new, yet uncharacterized threat.
- 2) The Cabrillo Fault poses the only fault rupture hazard to the City of Rolling Hills; however, the threat may be equally as great for seismically-induced reactivation of large deep-seat landslides which may have the same ground rupture and damage effect if sudden displacements are large.
- 3) The City of Rolling Hills is susceptible to shallow earthquake-induced landsliding. If saturated hillslope conditions are extraordinary, the potential for damages caused by debris flows and sudden reactivation of existing deep-seated landslides will increase accordingly.
- 4) Predicted seismic intensities on the order of $MM = VIII$ in bedrock areas on the Palos Verdes Peninsula can be generated by an earthquake of magnitude 7 on the Newport-Inglewood fault, and commonly causes fall of chimneys, columns, and monuments.
- 5) Damages will be greater for asymmetrical, split level residences and residences with irregular floor plans than for residences with symmetrical design. Split level residences, however, may be designed to mitigate landslide damage, and therefore, should only be encouraged when landslide mitigation is an issue.
- 6) Torsional racking of the foundation and wall elements of

irregularly shaped houses may cause concentration of damage between wings of houses. Wall panels of all frame houses may be thrown out of plum.

- 7) Collapse of interior and exterior nonstructural components of houses and buildings will cause the greatest share of injuries.
- 8) A magnitude 7 earthquake on the Newport-Inglewood fault may cause a 50 percent reduction in available hospital bed space within 10 miles of the City, necessitating a reevaluation of current emergency medical plans.
- 9) Disaster planning scenarios should consider the fact that utility services may be out for as much as 72 hours and that transportation into the City may be impeded by rock falls, soil slides, and fallen utilities. Transportation will also be impeded across many bridge crossings and major freeways in liquefaction areas, as identified on County of Los Angeles Seismic Hazard maps.
- 10) The potential for hazardous materials accidents in adjacent jurisdictions must be addressed in disaster planning scenarios for the City of Rolling Hills.

Geologic Hazards

Landslide Hazards and Corrective Analysis

Landslides are the most serious geologic hazard facing the residential community of Rolling Hills. Many residences in Rolling Hills have been built upon pre-existing, unrecognized, or recognized, but unstabilized landslides. The City is almost completely served by private sewage disposal systems which may exacerbate the hazard. A map illustrating both active and currently inactive landslides in the City of Rolling Hills is presented in the accompanying Geologic Hazards Map (refer to Figure S-2). The compilation of landslides shown in this figure relies primarily on previous field mapping and interpretation from published and unpublished map sources, ranging in scale from 1:12,000 to 1:200. The existence of smaller, indistinguishable landslides and areas of potential slope instability outside of the landslide areas delineated cannot be precluded. Thus, proposals for development outside of mapped landslide areas should be geologically investigated for landslide potential. The landslides that are shown in Figure S-2, however, should be stringently evaluated with respect to the potential impact of additional development or redevelopment in the vicinity.

Geologically, most of the landslides within the City occur in the Altamira Shale Member of the Monterey Formation. Landslide rupture surfaces are commonly along plastic clay beds or seams within clayey shale or siltstone units. These units experience a reduction in strength and move downslope in response to mass distribution within the slide, disequilibrium caused by movement on adjacent slides, or the added weight of incident rainfall and consequent increases in pore water pressures along the slide plane. The landslides presented in Figure S-2 consist of modern "active" (The Flying Triangle Landslide) or ancient "potentially active" block slides or rotational slumps. Secondary slumps and shallow surficial failure styles are often observed on the larger landslide masses, particularly where landslide debris is actively filling canyon bottoms. Potentially active landslides can be reactivated by natural processes, such as rainfall, or through the influence of man. Water can be introduced into the landslide by way of landscape irrigation and percolation of sewage effluent from septic tanks. Building or loading at the head of a slide can decrease the bedrock strength along an existing or potential rupture surface and "drive" the landslide down slope. Improper grading practices can also trigger existing landslides. For example, if the toe of a landslide or the lower, down slope support of dipping beds is removed, movement can be reactivated.



Mapped Currently Inactive Landslides



Mapped Active Landslides



Faults Dashed Where Approximately Located:
Dotted Where Concealed

Note: Arrows show generalized direction of movement.
Letters 'A-D' refer to references on following page.



0 1200
scale in feet

Note:

1. Hillside Areas with few or no landslides may reflect the status of landslide mapping or the presence of smaller unrecognized landslides. The map does not preclude the presence of existing landslides or the potential for slope failure outside of landslide-prone areas as compiled.
2. Landslide geometry is based on terrain features. More detailed study is necessary to confirm this mapping.

SOURCE: See following page.

Rolling Hills



General Plan

Figure S-2
Landslide and Fault Rupture Hazards

References for Figure S-2

- A. Cleveland, GB, 1976, Geologic map of the northeast part of the Palos Verdes Hills Los Angeles County, California: California Division of Mines and Geology; Map Sheet 27, Scale 1:12,000 Plate 1
- B. Cleveland, GB, 1976, Geologic map of the northeast part of the Palos Verdes Hills Los Angeles County, California: California Division of Mines and Geology; Map Sheet 27, Scale 1:12,000 Plate 2
- C. Slosson and Associates, 1987, Geologic map of the Flying Triangle Landslide, after topographic and geologic map compilation, Greater Klondike Canyon Plate VII, Scale 1:200
- D. Jahns, R.H., undated, unpublished geologic maps of the southern part of the Palos Verdes Peninsula, Palos Verdes Corporation Map sheets 22, 28, 29, Scale 1:200

The Flying Triangle Landslide, located in Klondike Canyon, illustrates a local example of a reactivated landslide. The landslide became an issue when the first indications of movement became evident in 1980. The cause of the movement can be directly related to the period of unusual heavy precipitation during the years 1973 to 1983. It has also been suggested that activation may well have been set by the slow infiltration of sewage effluent and surface irrigation over the years as development continued on the landslide.

The major pressures on hillslope development in the City of Rolling Hills, both on the active Flying Triangle landslide and on other potentially active landslides, are caused by intensification of existing development on residential lots throughout the City and the resultant expansion into currently undeveloped areas.

Intensification consists of additional construction and modification of existing construction or the complete demolition and redevelopment of a residential lot. Intensification expands the developed pad area into previously "natural" hillslope areas and often involves a corresponding increase in the size and volume of the onsite sewage disposal systems. The potential consequences of such development suggest that appropriate retroactive and proactive measures that govern the long-term stability of potentially active landslides should be part of a comprehensive hillslope management program, a program that recognizes the concern for future property damages incurred by residents. Steps have already been taken in this direction. Pursuant to building code provisions which prohibit construction in geologically unstable areas, the City has not permitted construction in the Flying Triangle since the slide activity in the early 1980s, except for repairs to existing structures. The General Plan in the Flying Triangle confirms and continues this policy.

Issues and Opportunities - Geologic Hazards

- 1) Active landslides and reactivation of potentially active landslides are the most serious geologic hazards facing the residential community of Rolling Hills, and are believed to be the result of many factors including the combined influence of years of heavy precipitation and development (effectiveness of drainage systems, over use of surface irrigation beyond the capability of the hillslope, infiltration of sewage effluent).
- 2) The major development pressures today come from intensified redevelopment of residential lots and expansion of new development into currently undeveloped areas, some of which

are on potentially active landslides.

- 3) Remedial measures to stabilize active landslides, including installation of sewage and dewatering measures, are economically costly to the City and residential community, but with increasing housing and land costs, retroactive and proactive comprehensive stabilization strategies may become viable due to changes in cost/benefit ratios.
- 4) Potential solutions for the control of retroactive and proactive landslides include regulating all artificial recharge, low irrigation vegetation, installation of monitoring and dewatering wells, effective drainage and sewer systems, removal or regrading of a slide in certain instances, or complete avoidance of extremely critical active landslides. Land use measures must be applied as early as possible, as hazardous area management becomes less effective with increasing development.
- 5) Several options are at the City's disposal to reduce the economic, and potentially life-threatening impact of landslide reactivation. Tax credits, property acquisition/purchase development rights, landslide overlay zones, assessment districts, or any combination of these measures, are potentially feasible solutions to the landslide dilemma. Any method requires the approval of the majority of the community. Any of the following measures may be appropriate in Rolling Hills:
 - Tax Credits: Reduces the property's tax liability as long as land is left undeveloped at a very low density. Tax credit programs take a variety of forms including current use value, deferred use, or as a restrictive agreement. This method provides incentive to limit development, although high property values reduce the effectiveness of the program.
 - Property Acquisition: The landslide areas can be managed to protect public safety, while meeting other community objectives, such as providing open space for recreation or low intensity uses. Appropriate financing options open to the City are grants, donations, or formation of an assessment district.
 - Landslide Overlay: An ordinance could be tied to a landslide inventory or a graduated landslide risk zone (e.g. high, moderate, low). Open space requirements, construction standards, effective slope maintenance, low irrigation vegetation, sewage disposal options, or density of

development are relevant measures that can be tied to a landslide overlay. If nonconforming uses within designated areas continue unchecked, zone variances are more likely. If tied to economic incentives or developer liability (impact on adjacent properties from accelerated movement caused by variance development), then program compliance and effectiveness of implementation are more likely.

- Assessment District: A plan can be formulated to provide funding for alternative landslide mitigation methods, open space or density restrictions, and financing for acquisition of landslide areas.

Flood Hazards

The City of Rolling Hills no longer participates in the Federal Emergency Management Agency, National Flood Insurance Program. Flood problems are primarily limited to the City's canyon bottoms. As development is prohibited in the canyon areas, flooding does not present a significant hazard to development in the community. Minor flooding problems related to run-off and inadequate drainage systems or grading design could occur in the City, potentially channelling run-off onto an adjacent residence. Such problems can be addressed during project review.

Fire Hazards

The City of Rolling Hills is vulnerable to small wildland fire hazards. Brush fires pose the primary threat, especially where residential development lies above chaparral filled canyons. The fuel in the canyons, if ignited, could threaten residences upslope with wind-carried cinders and direct ignition from uncontrolled fires. In the early 1970s, a serious fire occurred which destroyed many homes in the area, illustrating the potential for extensive damage.

The coastal sage plant community present in the canyon areas have historically shown a high susceptibility to brush fires in Los Angeles County. Although fire frequency tends to be highest in grassy areas, the coastal sage in the canyons and hillslope areas of the City present the greatest danger of high intensity fires i.e., the most difficult to contain, and a spreading rate that quickly exceeds the response rate. Fire danger in the City of Rolling Hills is most critical during late summer and fall months, especially when Santa Ana weather conditions prevail. Plant fuels posing the greatest threat during this period will be those located on the south-facing slopes.

The City of Rolling Hills is exposed to brush fire hazards from both outside and within the City's jurisdiction. Brush fire hazards along border areas of the City consist of the following: 1) the southern boundary with Rancho Palos Verdes, within the Klondike Canyon-Flying Triangle area and eastward, downslope of the Southfield Drive area, 2) the eastern boundary with Rancho Palos Verdes in the George F. Canyon area, 3) the Portuguese Canyon area, and 4) the western boundary with Rolling Hills Estates. Combined with the several canyons cutting through the City, the entire jurisdiction falls within the equivalent of Fire Zone 3, as defined by the Los

Angeles County Forester and Fire Warden.

The frequency of large brush fires in chaparral canyon areas on the Palos Verdes Peninsula is relatively low, although the City experienced a serious fire destroying many homes in the 1970s. While the low density of development in Rolling Hills reduces the chances for fire spread, a conflagration could develop should a fire ignite within any of the fire hazard areas in the City. A potential source of fire ignition is lightening, however, this is considered to be a highly improbable scenario on the Peninsula.

Electrical power lines may also pose a fire hazard, in the remote possibility that the lines are not automatically deenergized when knocked down by high winds or an earthquake. The majority of fires are caused by the accidental or deliberate actions of man. Considering that this is an essentially unpredictable parameter, and that the proximity of residences to dense brush filled canyons makes them extremely vulnerable, suggests that the risk is great enough to warrant more stringent fire prevention options than that afforded to Fire Zone 3. Such restrictions might emphasize adequate brush clearances, removal of flammable rubbish stored on the premises, or utilization of fire retardant or noncombustible roof construction, which are among the most significant factors which increase the fire hazard. The most immediate fire vulnerability of the City is the prevalence of combustible roof construction. An informal survey of residences conducted by the Los Angeles County Fire Department indicates that of the roughly 643 residences that were counted, 389 used wood shingle construction while 254 used some form of fire retardant materials. Because the survey was based only on a visual count and interpretation, a detailed inventory might adjust the total number of fire retardant or fire vulnerable roof construction by as much as 127 residences, which remain of uncertain construction. The City has recently passed an ordinance to require Class A, fire retardant roofs in all new construction.

A review of Los Angeles County Forester and Fire Warden activity reports suggests that the City of Rolling Hills possesses resident cooperation and efficient fire response capability. During 1988 through June 1989, 28 fire prevention inspections were performed at the request of residents in the City. During that time period, no brush clearance or rubbish storage violations occurred. Fire incidents over the last three years from 1987 through 1989 averaged approximately 20 a year, yet fire losses during that time amounted to only \$3,350 through June, 1989. That damages were limited to roughly \$55 per incident indicates that the response time of the

County of Los Angeles Fire Station (Station No. 56, located at 12 Crest Road West) contracted to the City for fire protection is adequate for fire incidents of such small magnitude. Significantly, no major brush fires occurred during that time.

Two other potential vulnerabilities of the City that are issues appropriate for the Safety Element are the lack of accessibility that exists in some sections of the community and the typical wooden construction used in residential development. Some residences, and particularly newer remote development taking place in the City, are more vulnerable to fire damage than others because of their relative seclusion. In some instances, road width requirements may be inadequate for maneuvering fire prevention equipment, including trucks and heavy equipment along narrow private roads. Road widths, although it has not yet been a problem, may impede fire prevention response activities. The residential construction of the City of Rolling Hills also exposes a vulnerability to earthquake-induced fires. Areas with wood-construction need protection from fire as much as, or more than, protection from ground shaking or faulting.

Issues and Opportunities - Fire Hazards

- 1) Fire retardant roofs are justified within the City of Rolling Hills because of the potentially hazardous situation posed by brush fires in canyon areas within the City and bordering undeveloped hillslope areas. The City recently strengthened its long-standing requirement for fire retardant roof materials to require Class A roofing.
- 2) Fire retardant construction and fire buffer zones are appropriate building regulation and land-use planning options for reducing the threat of earthquake-induced fire hazards.
- 3) The potential for impeded fire response because of remoteness of certain residences and narrow private roads suggests that residents should have the capacity for self reliant fire prevention strategies and firefighting equipment, such as additional brush clearance zones, improved peak load water supply capability, high pressure hoses, and fire extinguishers and/or sprinkler systems.
- 4) Neighborhood self-help groups, composed of neighborhood residents, can provide for quick notification and response to potentially disastrous brush fire incidents.

Emergency Response Preparedness and Recovery

The Safety Element is essentially a long-range emergency response plan. The hazards analyses in this report are aimed at producing a safe environment, easing the task of disaster response organizations during emergencies and identifying hazards necessary for making long-term recovery decisions. Effective short-term emergency response strategies exist in the event of a disaster within the City limits of Rolling Hills or areas contiguous to City limits. A comprehensive Emergency Preparedness Plan will be developed for Rolling Hills that combines these strategies in a coordinated manner both internally and with existing regional multi-jurisdictional plans. In the County of Los Angeles, the Sheriff has primary coordinating responsibility with public and private agencies and the County Fire Department in the event of an emergency. The City also has contractual agreements with the County Sheriff and Fire Department to protect public safety and property within the city limits. Utility companies supplying services to the community, such as Southern California Edison, California Water Service, Southern California Gas Company, and General Telephone, all have aggressive emergency response plans in the event of a disaster. For planning purposes, the worst-case scenario provided by major utilities emphasizes a 72 hour recovery period for services.

In a worst-case scenario in which earthquake-induced ground failure occurs within the City, either from fault rupture on the Cabrillo fault or reactivation of any one of the marginally-stable landslides within the jurisdiction, peak load water supply could be reduced. Underground natural gas distribution lines, although composed of flexible polyvinyl plastic, could pose an additional fire hazard if displacements are large enough. Combined with the relative isolation of some segments of the community, these worst case scenarios underline the importance of alternative sources of water for firefighting or other strategies to reduce fire spread in the event of extensive rupture or failure of the ground surface.

The most important observation related to the hazards discussed in this report, is the potential problem of lack of accessibility that exists in the City. In the event of a strong earthquake, small slides and slumps will block many of the private roads bordered by steep cut banks. This road blockage would have impact on emergency response capability, such as fire suppression at individual residences or the potential isolated fires which could be caused by malfunction of the electrical or gas utility systems. The expedient evacuation of injured residents could also be a problem, especially in the most

isolated areas of the community. One shall not anticipate having helicopter evacuation access for several days after a regional disaster.

Several mountainous areas in California with similar problems have turned toward developing and training self-help neighborhood groups. Individuals in the community are screened for specialized skills useful for self-reliance in an emergency, such as short-term medical care, utility damage assessment and repair, or knowledge of heavy equipment or fire suppression capability. Emergency provisions and supplies are inventoried and stockpiled, as well as necessary equipment for light rescue capability and radio communication. Chain of command is a key component of such groups. Residents are called upon to make rollcalls of neighbors and channel information back to central neighborhood commands. Some communities have designed these emergency groups around existing entities, such as the Neighborhood Watch Program. The City of Rolling Hills is well suited for this type of organized approach, because although these activities might take place following a major disaster, a significant number of lives can be saved by preparedness and efficient trained response.

The inaccessibility problem has been referred to frequently in the fire and emergency response sections because of the impact on firefighting and rescue functions. Primary transportation routes must also be planned in conjunction with designated neighborhood relief areas for those whose homes may be damaged. The three primary access and evacuation routes designated for the City are Crest Road from the west City boundary to Eastfield Drive, Eastfield Drive from Crest Road to the East City boundary and Portuguese Bend Road from Crest Road to the North City boundary. Figure S-3 shows the Emergency Evacuation Routes for Rolling Hills. A plan to identify and mitigate potential earthquake-induced road blockages from landsliding or fallen structures will be included in the Emergency Preparedness Plan. Road maintenance priorities and road clearance activities would have priority along the primary evacuation routes.

Long-term recovery and reconstruction is a potential issue in the City of Rolling Hills. It is imperative that local governments have appropriate procedures for rebuilding in heavily damaged areas, which in the worst-case scenario for the City of Rolling Hills would most likely be confined to reactivated landslide complexes. Because residential owners may wish to rebuild in these areas, appropriate policies must address decision making-processes and pre-selected alternatives for such instances. Hastily made decisions



cba ↑ North 0 2000
scale in feet

SOURCE: City of Rolling Hills

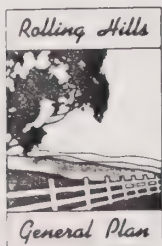


Figure S-3
Emergency Evacuation Routes

JUNE 25, 1990

on temporary rebuilding may rule out certain alternatives for reconstruction. Changes in land-use, such as open space, or additional building regulations might be appropriate in some instances.

Plans for rebuilding depend heavily upon surveys and analyses of geologic effects, as well as structural conditions of the damaged residences. The City has agreements with airphoto teams that may assist in this respect; however, site investigations of moderately to severely damaged areas is a critical prerequisite to land use planning and rebuilding after an earthquake or other disaster. Once damaged areas are identified, this information may be incorporated with existing knowledge of seismic and geologic hazards and post-disaster recovery procedures. Zoning and subdivision and building regulations are key devices for implementing changes during the redevelopment process.

Effective disaster preparedness will require the concerted efforts of City, County and State agencies and residents. Not only must effective plans and procedures be in effect, but those plans should be tested and improved through frequent disaster exercises.

Issues and Opportunities - Emergency Preparedness

- 1) In the aftermath of a large earthquake or other disaster, some areas of the community may be relatively isolated. Designated disaster control groups would improve the effectiveness of short-term emergency response.
- 2) Primary transportation routes and disaster response routes are an integral part of a local emergency response plan.
- 3) Appropriate land use and building regulations alternatives provide the greatest degree of flexibility during the reconstruction and rebuilding in the aftermath of a disaster.
- 4) Existing emergency response plans involving multiagency, multigovernment, and nonprivate and private sector should be periodically reviewed to account for new information on seismic or geologic hazards within the community.
- 5) The General Plan update process provides the City an ideal opportunity to prepare its own comprehensive Emergency Preparedness Plan.

GOALS AND POLICIES

The following goals and were developed as part of the General Plan Update, and policies provide the framework for reducing the social and economic disruptions caused by the effects of natural hazards.

GOAL 1: Recognize Rolling Hills' risk of earthquake-induced hazards and implement appropriate policies and programs to address this risk.

Policy 1.1: Restrict expansion of existing development and construction of new development near active faults or landslide areas.

Policy 1.2: Continue enforcement of site investigation (such as seismic, geologic, and soils investigations), and implementation of adequate hazard mitigation measures for development proposals near active faults and areas vulnerable to direct or secondary impact from earthquake-induced slope instability.

Policy 1.3: Advocate the development of easily maintained and earthquake resistant utility lifelines, including natural gas, water, power and communications.

Policy 1.4: Promote the construction of new residences or modifications to existing residences to be built in simple geometrical configurations.

Policy 1.5: Improve knowledge of the hazards and mitigation of nonstructural interior and exterior components, especially in high occupancy building and emergency operation centers.

GOAL 2: Protect public safety and minimize the social and economic impacts from landslides hazards.

Policy 2.1: Continue to restrict new development and expansion of existing development in areas susceptible to landsliding, debris flow, and rockfalls, unless these geological hazards can be mitigated by conventional structural or alternative nonstructural methods.

Policy 2.2: Explore and implement hazard mitigation and slope maintenance plans for existing and continuing development in hillside areas, especially areas underlain by large landslide complexes.

Policy 2.3: Consider the alternative use of properties for a natural preserve in active landslide areas.

Policy 2.4: Promote and facilitate conversion from septic tank to sewage system to help mitigate slope failure.

GOAL 3: Minimize injury, loss of life and property, and economic disruption caused by flood hazards.

Policy 3.1: Continue to restrict expansion of development in flood prone areas, especially in canyon bottoms and stream areas.

Policy 3.2: Continue to ensure that runoff caused by new development does not impact existing development.

GOAL 4: Reduce threats to public safety and protect property from brush fire hazards.

Policy 4.1: Strengthen review requirements of new projects and modifications to existing development in the City of Rolling Hills to continue emphasis upon the use of fire retardant materials.

Policy 4.2: Continue to coordinate fire fighting efforts with adjacent communities to prevent the rapid spread of brush fires and to ensure efficient response.

Policy 4.3: Advocate and support the creation of neighborhood fire education programs and fire fighting capability, especially in the result of post-earthquake residential fires.

Policy 4.4: Encourage the use of natural fire resistant landscaping in development.

GOAL 5: Reduce threats to the public health and safety from hazardous materials and wastes and the transport of such materials.

Policy 5.1: Adopt Los Angeles County Hazardous Waste Management Plan by reference.

Policy 5.2: Strengthen emergency response plan for accidental atmospheric releases of hazardous materials in adjacent industrialized communities.

Policy 5.3: Promote the safe transportation and storage of hazardous materials in areas surrounding the City of Rolling Hills.

Policy 5.4: Educate homeowners on appropriate storage and use of hazardous materials.

GOAL 6: Strengthen Rolling Hills' short-term emergency response and long-term recovery capability.

Policy 6.1: Develop an Emergency Preparedness Plan for Rolling Hills that is comprehensive and responds to regional multi-jurisdictional emergency planning efforts.

Policy 6.2: Promote greater public awareness and understanding of safety hazards and emergency preparedness and response procedures.

Policy 6.3: Promote the development of community or neighborhood self-help and disaster control groups to improve effectiveness of local emergency response, light search and rescue, and short-term medical care.

Policy 6.4: Improve inter-agency and multi-jurisdictional planning to ensure efficient and integrated emergency response capability to all disasters.

Policy 6.5: Promote improved cooperation with nonprofit and private sector emergency response organizations.

Policy 6.6: Maintain designated evacuation and disaster routes in Rolling Hills.

Policy 6.7: Develop appropriate land use and building regulation alternatives for areas heavily damaged in a disaster.

Noise Element



June 25, 1990

NOISE ELEMENT
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NOISE ELEMENT

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NOISE ELEMENT

INTRODUCTION

The Noise Element of a General Plan is a comprehensive program for including noise control in the planning process. It is a tool for local planners to use in achieving and maintaining compatible land use with environmental noise levels. The Noise Element identifies noise sensitive land uses and noise sources, and defines areas of noise impact for the purpose of developing programs to ensure that Rolling Hills residents will be protected from excessive noise intrusion.

The Noise Element follows the revised State guidelines in the State Government Code Section 65302(f) and Section 46050.1 of the Health and Safety Code. The element quantifies the community noise environment in terms of noise exposure contours for both near and long-term levels of growth and traffic activity. The information will become a guideline for the development of land use policies to achieve compatible land uses and provide baseline levels and noise source identification for local noise ordinance enforcement.

Purpose of the Element

The purpose of the Noise Element is to outline methods to reduce and control noise, in order to maintain and enhance Rolling Hills as a quiet residential community. Although the primary emphasis is on transportation noise, this element will also consider noise generated from non-transportation sources, including construction and various domestic origins.

This element embodies three major considerations:

- To provide a guide for the development of the Land Use Element by determining noise compatible land uses.
- To identify noise problems and noise sources in the community.
- To mitigate, regulate and propose alternatives to noise problems within the City.

Relationship to Other Elements

The Noise Element is closely related to the Circulation, Land Use and Housing Elements. The primary noise sources in the City are roadway corridors, with noise levels varying depending on the number of vehicles in operation. Roadway location and classification, as defined by the Circulation Element, will determine the intensity and location of noise in the City. Inseparable from circulation considerations are the locations and types of land uses throughout the City. The location of circulation routes in relation to different land uses is a major determining factor of noise exposure. The high quality residential environment that the Housing Element seeks to maintain could be significantly impacted by noise, requiring close coordination between these elements.

INVENTORY OF CURRENT AND FORECAST CONDITIONS

This section of the Noise Element contains a detailed description of the current and projected noise environment within Rolling Hills. This description of the noise environment is based on an identification of noise sources and noise sensitive land uses, a community noise measurement survey and noise contour maps.

To define noise exposure, the major sources of noise in the community must be identified. The sources of noise in Rolling Hills include: roadways, aircraft overflights, and stationary equipment. To completely assess the noise environment in the City, noise sensitive receptors must also be identified. As mandated by the State, noise sensitive receptors include, but are not limited to, areas containing schools, hospitals, rest homes, long-term medical or mental care facilities, or any other land use area deemed noise sensitive by the local jurisdiction.

Based upon the identification of the major noise sources and the location of sensitive receptors, a noise measurement survey was conducted. The function of the survey is threefold. The first is to determine the existing noise levels at noise sensitive land uses. The second function is to provide empirical data for the correlation and calibration of the computer modeled noise environment. A third important aspect of the survey is to obtain an accurate description of the ambient noise levels in various areas throughout the City.

Noise contours for all of the major noise sources in Rolling Hills were developed based upon current and future traffic conditions. These contours were determined from the traffic levels for these sources. The contours are expressed in terms of the day-night noise level (Ldn). The existing conditions scenario is derived from 1987 traffic levels and environmental conditions. The future conditions scenario is based upon future traffic levels.

Sources of Noise

The most common sources of noise in urban areas are transportation related noise sources. These include automobiles, trucks, motorcycles, and aircraft. Motor vehicle noise is of concern because it is characterized by a high number of individual events which often create a sustained noise level and its proximity to areas sensitive to noise exposure. Aircraft operations, though less frequent, may generate high noise levels that can be disruptive to human activity.

The City of Rolling Hills has a very quiet sound environment with very few sources of noise. Noise sources in Rolling Hills fall into three basic categories. These are: minor arterial and collector roadways; aircraft overflights; and stationary sources. Each of these sources and their impacts on the noise environment of Rolling Hills are summarized in the following paragraphs.

Palos Verdes Drive is located on the northern boundary of the City of Rolling Hills. The collector roadways in the city include: Portuguese Bend Road, Crest Road, Eastfield Drive and Southfield Drive. These roadways are the major transportation noise sources within the City. Traffic noise on surface streets is a source of noise within the community. Residences exist along all of these roadways although, pursuant to zoning, most are setback a minimum of 50 feet from the front easement line.

Torrance Airport is a General Aviation Airport located to the north of the City. Operations from this airport occasionally overfly the City and consist primarily of small piston aircraft. While the number of overflights within the City is not significant, these aircraft do result in some occasional single-event disturbance.

Numerous other noises related to human and animal activity can disrupt the quietness of an area. Stationary noise sources in Rolling Hills include pool equipment, air conditioners, music, leaf blowers, tennis courts, paddle tennis courts and various other types of private recreational and athletic facilities. Noise generated by these facilities, e.g., bouncing balls, tennis ball machines and motor noises, have a more pronounced effect on the audible atmosphere in a City like Rolling Hills with a low ambient noise environment. Another source of nuisance noise in the community stems from the outdoor keeping of animals, such as dogs and horses. Such activities can usually be controlled through municipal noise standards.

The Noise Element calls for the creation of a municipal noise ordinance to regulate isolated peak noise events. The noise ordinance should include standards for location and screening of noise-generating uses, as well as maximum acceptable noise levels. Hours of operation and permitted activity should also be considered, and sliding scales developed for noise levels which vary by time of day. Noise generating uses should generally be sited at the maximum practical distance from adjacent residences. Screening should be considered in appropriate locations and designs for noise generating uses.

Noise Sensitive Receptors

The City of Rolling Hills has a number of noise sensitive land uses. Within the city is a public school, as illustrated on the Existing Land Use Map (Figure LU-1). In addition, as an entirely residential community, all of Rolling Hills can be considered noise sensitive.

Community Noise Measurement Survey

An assessment of the natural quiet and the noise sources in the City were determined through a community noise survey. The noise measurement survey was conducted at five noise sensitive locations which reflect the noise levels within the City. The locations of noise measurement are illustrated in Figure N-1. The results of the survey are found in Table N-1.



cba ↑ North 0 2000
scale in feet

SOURCE: Mestre-Greve Associates

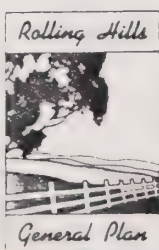


Figure N-1
Noise Measurement Locations

JUNE 25, 1990

TABLE N-1
NOISE MEASUREMENT RESULTS
AUGUST 1, 1989

Site	Predominant Land Use	LEQ	Lmax	L1	L10	L50	L90	L99	Major Source of Noise
1. Portuguese Bend Road (S. of Saddle Back)	Residential	56	70	66	61	45	39	38	Local Traffic
2. Portuguese Bend Road (N. of Crest Road)	Residential	53	70	65	56	41	38	37	Local Traffic
3. Crest Road (E. of Portuguese Bend Road)	Residential	59	75	70	63	43	37	36	Local Traffic
4. Crest Road (E. of Portuguese Bend Road)	Residential	59	73	69	63	43	38	37	Local Traffic
5. Eastfield Drive (S. of Chuckwagon Rd.)	Residential	60	78	73	62	38	36	35	Local Traffic
6. Eastfield Drive (N. of Roundup Rd.)	Residential	58	74	70	61	44	40	38	Local Traffic

Community Noise Contours

The day-night sound level (Ldn) is the measurement of noise exposure preferred by government agencies responsible for establishing noise standards and criteria. The Ldn represents an average of the A-weighted noise levels occurring in a 24-hour period, weighting noise that occurs at night (10 p.m. to 7 a.m.) to account for the greater sensitivity that people have to noise at night.

The noise environment for Rolling Hills can be described using noise contours developed for the major noise sources in the City. The contours are developed for existing (1987) traffic conditions as presented in Figure C-1, as well as projected conditions under General Plan buildout, and are depicted in Figures N-2 and N-3. The contours are based on the existing and future conditions of traffic volumes. Noise contours represent lines of equal noise exposure, just as the contour lines on a topographic map are lines of equal elevation. The contours shown on the map are the 55 Ldn noise level. The noise contours presented should be used as guide for land use planning. The 55 Ldn contour defines the Noise Referral Zone. This is the noise level for which noise considerations should be included when making land use policy decisions.

The contours presented in this report are a graphic representation of the noise environment. These distances to contour values are also shown in tabularized format in Table N-2. Topography and intervening buildings or barriers have a very complex effect on the propagation of noise. To present a worst case estimate, the topographic effect is not included in these contours.



55 Ldn Noise Contour



↑ North

0 2000
scale in feet

SOURCE: Mestre-Greve Associates

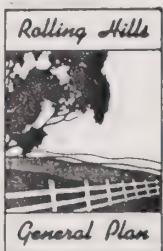


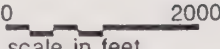


Figure N-2
Existing Noise Contours

JUNE 25, 1990



 55 Ldn Noise Contour

  North  0 2000
scale in feet

SOURCE: Mestre-Greve Associates

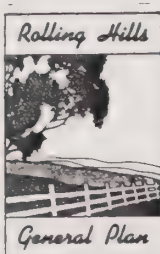


Figure N-3
Projected Noise Contours
Under General Plan Buildout

JUNE 25, 1990

TABLE N-2
DISTANCE TO TRAFFIC NOISE CONTOURS

EXISTING CONDITIONS

Roadway Name	Index	ADT (,000)	Speed	LDN@ 100 ft.	Distance to Contour (feet)		
					50 LDN	55 LDN	60 LDN
CREST ROAD							
East Gate - Buggy Whip Dr.	1	2.3	35	53.3	167	77	36
Buggy Whip Dr. - Portuguese Rd.	1	1.1	35	50.1	102	47	22
Portuguese Rd. - Southfield Dr.	1	2.6	35	53.9	181	84	39
EASTFIELD							
Southfield Dr. - Chuckwagon Rd.	1	1.4	35	51.2	120	56	26
Chuckwagon Rd. - P.V. Drive East	1	2.0	35	52.7	152	70	33
PORTUGUESE BEND ROAD							
P.V. Drive N - Saddleback	1	4.0	35	55.7	241	112	52
Saddleback - Saddleback	1	4.0	35	55.7	241	112	52
Saddleback - Crest Rd.	1	2.5	35	55.7	176	82	38
SADDLEBACK ROAD							
Portuguese Rd. - Portuguese Rd.	1	0.4	35	45.7	52	24	11
PALOS VERDES DRIVE SOUTH							
West - Rolling Hills Rd.	1	28.0	35	64.2	882	410	190
Rolling Hills Rd. - East	1	35.0	35	65.1	1024	475	221

TABLE N-2
DISTANCE TO TRAFFIC NOISE CONTOURS
(continued)

FUTURE CONDITIONS

Roadway Name	Index	ADT (,000)	Speed	LDN@ 100 ft.	Distance to Contour (feet)			
					50 LDN	55 LDN	60 LDN	
CREST ROAD								
East Gate - Buggy Whip Dr.	1	2.48	35	53.6	175	81	38	
Buggy Whip Dr. - Portuguese Rd.	1	1.21	35	50.5	108	50	23	
Portuguese Rd. - Southfield Dr.	1	2.73	35	54.1	187	87	40	
EASTFIELD								
Southfield Dr. - Chuckwagon Rd.	1	1.52	35	51.5	126	59	27	
Chuckwagon Rd. - P.V. Drive East	1	2.13	35	53.0	158	73	34	
PORTUGUESE BEND ROAD								
P.V. Drive N - Saddleback	1	4.30	35	56.0	253	117	54	
Saddleback - Saddleback	1	4.06	35	55.8	244	113	52	
Saddleback - Crest Rd.	1	3.40	35	55.0	216	100	47	
SADDLEBACK ROAD								
Portuguese Rd. - Portuguese Rd.	1	0.42	35	45.9	54	25	12	
PALOS VERDES DRIVE SOUTH								
West - Rolling Hills Rd.	1	34.00	35	65.0	1004	446	216	
Rolling Hills Rd. - East	1	42.70	35	65.0	1169	543	252	

SUMMARY OF FINDINGS

The sound levels in Rolling Hills are generally low and indicative of a rural environment. In most areas around the City, there are no significant noise sources. Where there are noise sources, the predominate sources of noise in Rolling Hills, as in most other communities, come from mobile noise sources including motor vehicles. Minor arterial roadways adjacent to the City and collector roadways within the City expose portions of the City to traffic noise levels. General aviation aircraft operations from Torrance Municipal Airport also contribute to the noise environment. The noise impact due to aircraft are considered minimal but do result in occasional single event disturbance. Other sources of noise within the City are from non-transportation sources including mechanical equipment or construction noise. The primary source of equipment noise is from pool pumps/filters, air conditioners, music and leaf blowers. The noise environment in Rolling Hills is typical of a rural setting, except at locations directly affected by these transportation and non-transportation noise sources. In most locations around the City, noise is limited to the sounds of nature.

Noise affects all types of land uses and activities, although some are more sensitive to high noise levels than others. Land uses identified as noise sensitive include residences of all types, hospitals, rest homes, convalescent hospitals, places of worship and schools. As an entirely residential community, all of Rolling Hills can be considered noise sensitive.

Based on a net potential increase in 59 residential dwellings under General Plan buildout, the quiet noise environment in Rolling Hills will likely remain intact. Nonetheless, the Noise Contour Maps (Figures N-2 and N-3) do illustrate slight increases in traffic noise levels generated by increases in traffic volumes. The 55 Ldn contour illustrated on these maps represents the Noise Referral Zone for which any proposed noise sensitive land use within this zone should be evaluated on a project specific basis. For the City of Rolling Hills, 55 Ldn represents zones where residential development should be discouraged without proper mitigation as part of the project. This is designed to ensure continued quiet living environments within the City.

The sources of noise in Rolling Hills can be divided into two basic categories, transportation sources and non-transportation sources. A local government has little direct control of transportation noise

at the source. State and Federal agencies have the responsibility to control the noise from the source, such as vehicle noise emission levels. The most effective method the City has to mitigate transportation noise is through reducing the impact of the noise onto the community (i.e., noise barriers and site design review) or reducing the level of traffic or speeds.

The most effective method to control community noise impacts from non-transportation noise sources is through application of a Community Noise Ordinance. The Noise Element calls for the development of Community Noise Ordinance to help ensure that City residents are not exposed to excessive noise levels from non-transportation noise sources. The Noise Ordinance should be designed to protect quiet residential areas from stationary noise sources. The noise levels encouraged by the ordinance would be typical of a quiet residential area.

GOALS AND POLICIES

The following goals and policies were developed as part of the General Plan Update and reflect input received from the General Plan Advisory Committee. They have been prepared to ensure noise compatible land use planning in Rolling Hills.

GOAL 1: Preserve and enhance Rolling Hills' quiet rural atmosphere.

Policy 1.1: Develop and implement a comprehensive community Noise Ordinance to provide mitigation of noise-generating uses.

Policy 1.2: Require the location of public and private recreational activities to limit the noise impact on adjacent residences.

Policy 1.3: Require the location of animal holding areas to minimize noise spillover onto surrounding properties.

Policy 1.4: Promote the use of landscaping to obscure noise production from roadways and adjacent properties.

Policy 1.5: Reduce transportation noise through strict enforcement of speed limits in the City.

Policy 1.6: Evaluate noise generated by construction activities, and appropriately regulate through a Community Noise Ordinance.



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